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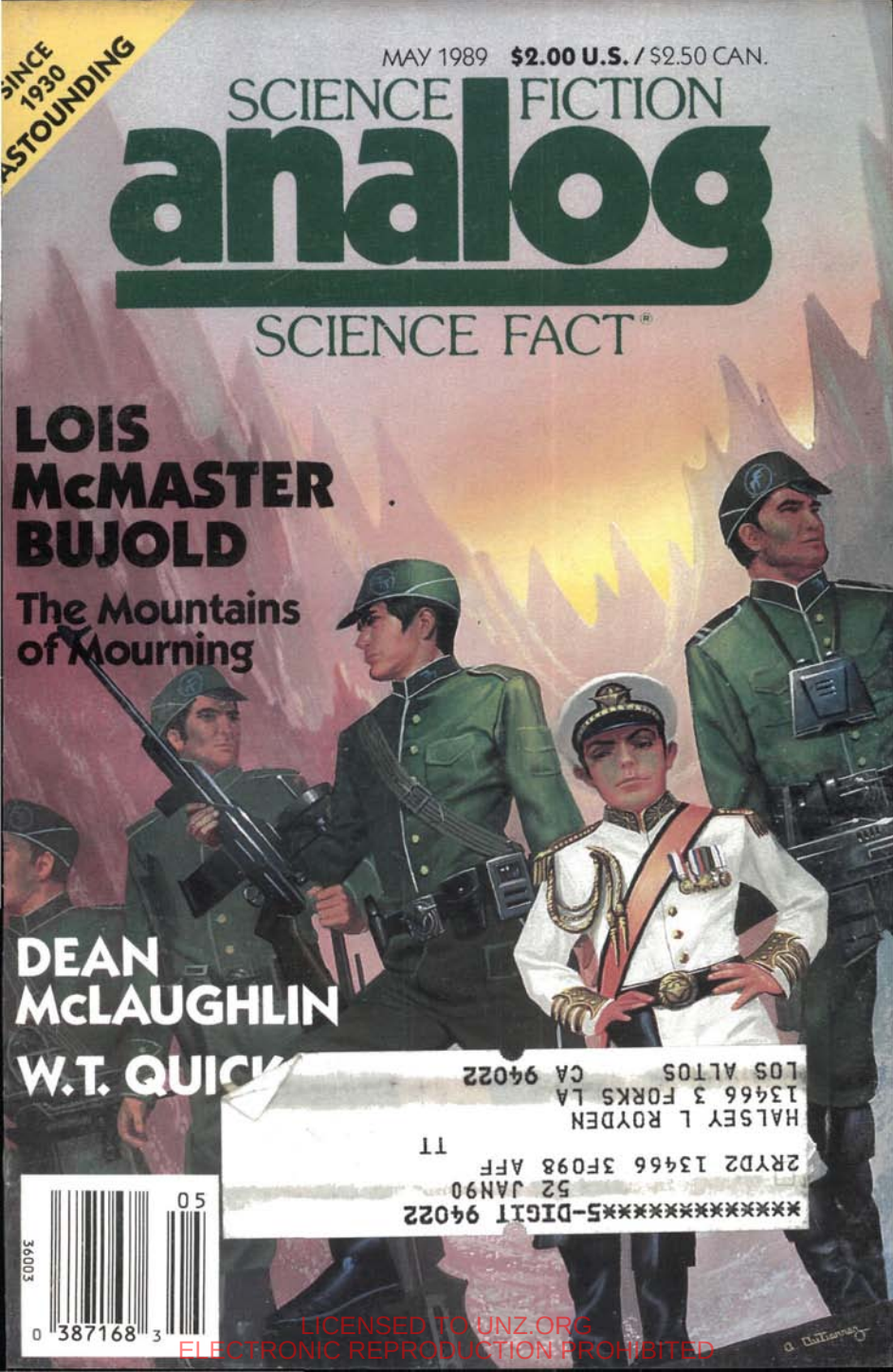

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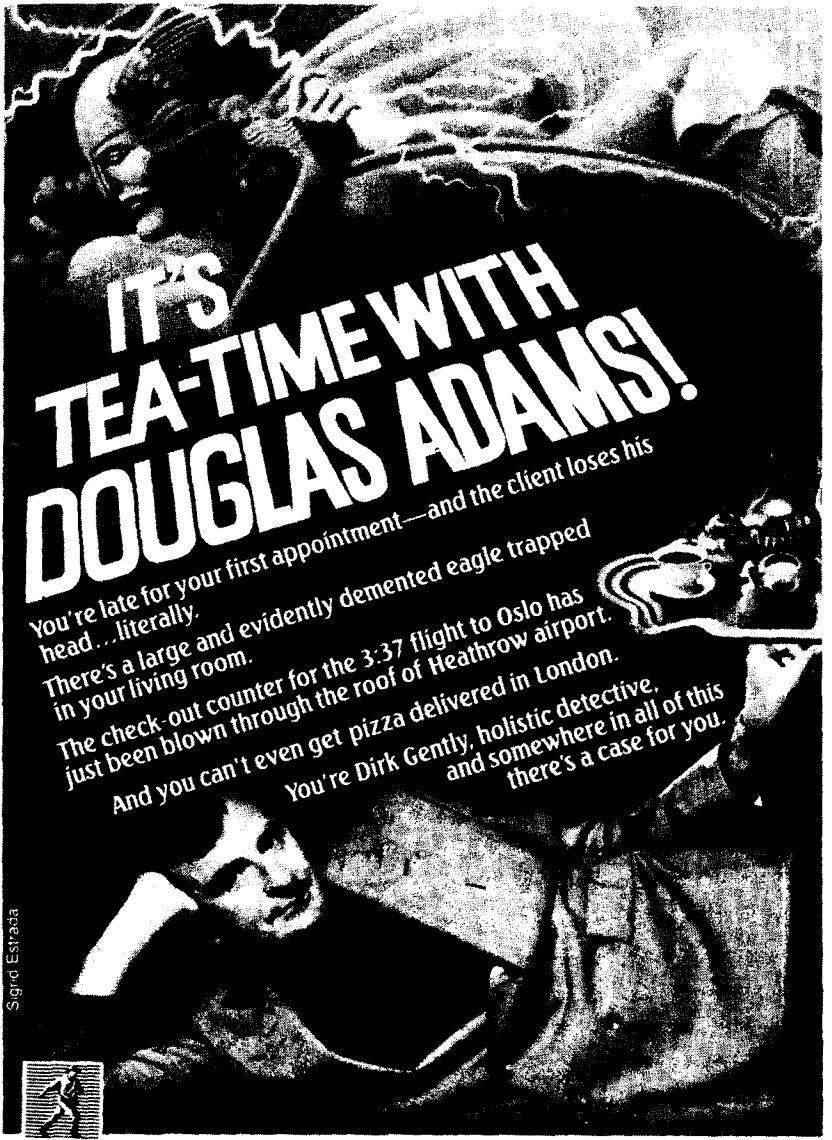
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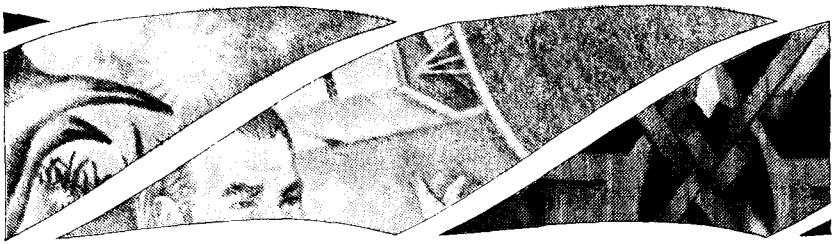

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Editorial

UTOPIA TEST

Stanley Schmidt

Elsewhere in this issue Warren Salomon, discussing possible motivations for interstellar migration and colonization, mentions what he calls "the libertarian scenario": the idea that people might migrate to colonies in space or on other planets to get away from oppressive government and establish havens of freedom. "Once such a world was established," he says, "settlers would find their way . . . Some of these would be excellent settlers, some would not. There'd be no way to pick only the best and brightest. The very existence of an agency screening out undesirables would contradict the *laissez faire* nature of the destination."

Salomon's article makes many good points, and I recommend it to your attention. But I can't resist taking a closer look at *this* point and questioning just how valid it is, and whether there might be exceptions. The first point that comes to mind is that the mere fact that people go somewhere to escape one kind of regulation or persecution by no means guarantees that they won't sooner or later establish new ones of their own. It's true that at least some of the colonies that eventually became the United States were established by people seeking some kind of freedom that they weren't getting where they came from. It's also true that every one of them established some form of government right away, and tended to acquire more and more as time passed. Even colonies that were most explicitly established to provide a place where people could practice a particular kind of religion without persecution were sometimes prompt, systematic, and strict about persecuting *other* kinds.

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So the mere fact that a colony is established in the name of "libertarianism" or "freedom" does not necessarily imply that it will impose no restrictions of its own. It does not even imply that it will avoid imposing any particular *kind* of restrictions—including those on immigration.

But that is not my main point. I don't want to make a big thing of the historical observation that what societies do is not always completely consistent with what they say they do. I want to go farther than that and propose for consideration the hypothesis that maybe a colony *could* do what Salomon says it couldn't—and that the very act of doing so could make it more truly libertarian, and more viable, than many societies that have preceded it.

Governments are considered by some as classic example of a "necessary evil," with equal emphasis on both words. It would be nicer not to have them (I believe it was Jefferson who said, "That government is best which governs least"), but they exist because individuals, left to themselves, cannot be trusted to interact without destructive consequences to one another and to the society they live in. It's debatable, though, whether this is equally true for *all* individuals. I postulate, on the basis of my own more or less close observation of several hundred individuals, and more remote observation of many more, that it isn't.

I know people who have lots of brawn or other forms of clout, short fuses, and no real conception that anybody's goals warrant consideration but their own. I know others who consistently try to see any interpersonal situation from the viewpoint of everybody involved and to take all those views into account to arrive at a fair course of action, and consider certain kinds of action completely unacceptable on ethical grounds. To some people, murder is the obvious solution to many problems, if they think they can get away with it. To others, murder is *never* an acceptable option, even if the alternative is their own death at another's hand. Some people, as the old saying maintains, have their price for anything; others will not do some things for any price. The kinds of social interactions you get are going to depend largely on how many of which kinds of people you have in the melting pot. A nation consisting entirely of Hitlers would be a very different place from one consisting entirely of Gandhis, and one with a few of each and a lot of many other types would be different still.

Historically, it's been pretty much taken for granted that real societies include a mixture of many types, in various numbers, covering a multidimensional spectrum which is commonly oversimplified into the pat expression "human nature" (which has the drawback of sounding as if there is *one* human nature that all humans share). There's a lot of truth in this assumption, because historically almost all populations have been mixtures of whatever people happened to arrive where they lived, whether by birth or by immigration. (There have, of course, been some attempts to control both. Many societies have practiced selective infanticide, and

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even contemporary Australia and the United States have restrictions on immigration.)

But suppose a group obtains an island or an artificial satellite or a planet and sets out to control *all* sources of input to the population, so that it does contain "only the best and brightest," and stays that way. Specifically, suppose this society resolves to select as its citizens only those people who are capable of living together with little or no formal government—and then allow them to do so. It has a "double standard": in regard to who is allowed to live there, it is not the least bit libertarian. But once people are accepted into the population, it is so much so that it at least approximates anarchy—in the sense of having no formal government, but not in the sense

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GARFIELD REEVES-STEVENS

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of being chaotic.

In this society, citizenship is not a birthright. It is a privilege which is conferred, without exception, by invitation only. Would-be immigrants are evaluated for their ability to live peacefully under the noncoercive conditions prevailing there. Children born there are raised with a kind of discipline aimed at making them capable of living well without external discipline when they reach adulthood. At some designated point, they, like immigrants, are evaluated for their psychological fitness to live as responsible adults without formal laws. If they pass, they are accepted as free adult citizens; if not, they must go elsewhere, never to return. Both immigrants and natives, once accepted, are thereafter free to do whatever they want. The viability of the system depends on the fact that these are people who won't *want* to do things destructive to other individuals or to the society as a whole.

It sounds far-fetched, but then, as far as I know, nothing like it has ever been attempted. The basic premise, that some groups of people are more capable than others of getting along without a lot of externally imposed constraints, is defensible. I personally know a number of people who could form a group that would have a good chance of working this way—but it wouldn't be very big. How feasible would it be to make something like this work on a larger scale? And if it could be done, could it last?

The first requirement, of course, would be a place to put it, sufficiently isolated from other societies so that it could go its own way. The ability to travel across interplanetary or interstellar distances, but not *too* easily, could make this easier to achieve than it has ever been on Earth. Here, such attempts would have to be confined to things like islands or remote mountain settlements. They could be done, but only on a small scale; and they would still not be all that hard to reach, if anybody from the outside world wanted to bother. In space, it might be easier for a determined group to set up housekeeping on a planet or an O'Neill colony that they could reach to settle, but which would be too difficult and expensive for others to visit very often. Thus it's a reasonable conjecture that space travel will lead to a variety of social experiments.

The next crucial requirement for this particular experiment is a way of determining who the qualified citizens are. If I wanted to try it on a tiny island with a dozen or so friends, I might be able to pick them on the basis of my personal judgment of their character. But the success of that depends both on my knowing them very well and on my being a very good judge of character. Those conditions *might* be met for an individual selecting a handful of other individuals, but both are impractical for a society on the scale of a city or a nation or a world. Making reliable selections of strangers would require both a better developed science of sociology than we now have, to establish exactly what personal qualities are needed, and better techniques of psychological testing, to determine to what extent individuals have those qualities. It is not unreasonable to suppose that both of those re-

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quirements may eventually be met, so that suitable testing could be done.

What *are* the qualities that would be needed? Well, I don't have that better developed science of sociology, so I can only make some general, intuitive guesses. Certainly people who are going to maintain a society without formal rules will need a very strong, well thought out sense of personal ethics, with clear ideas of what they are willing to do under what kinds of conditions. They will need a clear conception that others have rights comparable to their own, warranting equal consideration in decision-making. But good will is not enough. They will also have to have enough intelligence and understanding of how things work—including human beings and societies, as well as the physical universe—so that they can make reasonable predictions of the consequences of their actions.

Actually making the society work, of course, will involve lots of practical problems—but the kind of people we're talking about should be good at solving them. Who will build and maintain roads, or control air traffic? Probably groups who want to do so, and the users will pay for their use. How will they pay? There's always barter, of course, but that's awkward. That's why money evolved, and something like it would probably evolve again, though perhaps in a form we're never seen. I suspect such things would be easiest to work out on a relatively small scale. The larger such a society gets, the more its institutions are likely to resemble government—or at least those parts of government that have to do with coordinating large communal projects, as distinct from those parts concerned with dictating or punishing personal conduct.

A certain minimal amount of "government" would be necessary in any case, if only to administer the population controls—determining who is allowed in, and making sure that others get out or stay out. But, again, those who *are* allowed in would have few or no external controls on their personal behavior. There might even be no laws against murder; but then, they would not be needed because the people allowed to stay would not consider murder anyway.

It is *not* reasonable to assume the testing system would be absolutely perfect, of course, any more than any other system has ever been absolutely perfect. Presumably there still would be the occasional transgression, up to and including the rare murder—which would go unpunished unless others in the neighborhood decided to do something about it on their own. Victims of the rare "crime" (if I may use that word in the absence of formal legal definitions) would have no legal recourse as we know it. But they would have willingly accepted that risk as part of the price of living there. What matters in terms of real risk is not what kind of laws there are against theft or murder, but how often those things actually happen. New York City has plenty of laws against a wide variety of crimes, but it also has a very high crime rate. Given the choice, would you rather live there or in a place that had no laws against

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murder, but almost nobody would dream of committing it? Some people would answer that question either way, which is fine—nobody *has* to live in the place I'm postulating.

Assuming suitable people can be identified and separated from the rest of the population, they might well be able to make a system like this work. But how long could they keep it going? I see two main threats to its stability: internal evolution and external pressures. Experimental "utopias" in the past (none of which, to my knowledge, have been constructed along the lines I'm describing) have often failed because their children did not share the founders' ideas or personalities. In the experiment I'm describing, that should be far less likely to happen because children, too, are tested for fitness to stay. To us, in a country where citizenship is conferred by birth, that idea may seem the most disturbing feature of the whole proposal. But it is no more extreme than things actually done by many human cultures that have already existed, so it seems to me well within the bounds of "possible human nature." And it would go a long way toward protecting the society from falling apart because of raising descendants who threaten it. It would not, however, completely eliminate change. The kinds of people who would want to live there would not want that anyway; and in fact they seem more than commonly likely to come up with innovative ideas, both technological and social, that would demand new responses. They would have to be very careful to strike a balance between keeping the population capable of living this way, and letting the culture's specific ways of doing things become rigid and stagnant. How well and how long they could succeed is a matter of considerable uncertainty.

External pressures, though, may be the larger danger. As long as the society is truly isolated and self-sufficient, it may be able to keep itself afloat for quite a while. But complete isolation is difficult to come by. Others may covet this society's material resources, or resent its sending its unwanted people to them. They may consider its ways "evil" and feel a moral obligation to "punish" or "reform" it; or it may find itself in a strategic position between two belligerents. For any number of reasons, it may find itself under attack from without. Finding a way to defend an ultra-libertarian society against a tightly organized military threat could be a real challenge. But then, remembering the kind of people we're talking about, are you *sure* they couldn't meet it?

For such reasons, I have my doubts about how viable a society with virtually no laws governing its own people could be, even with a very good, reliable screening system for selecting people with the best possible chance of making it work. But even if they couldn't achieve the absolute ideal and keep it going forever, I can imagine their achieving something close enough that I'd be very interested in seeing the experiment tried. ■

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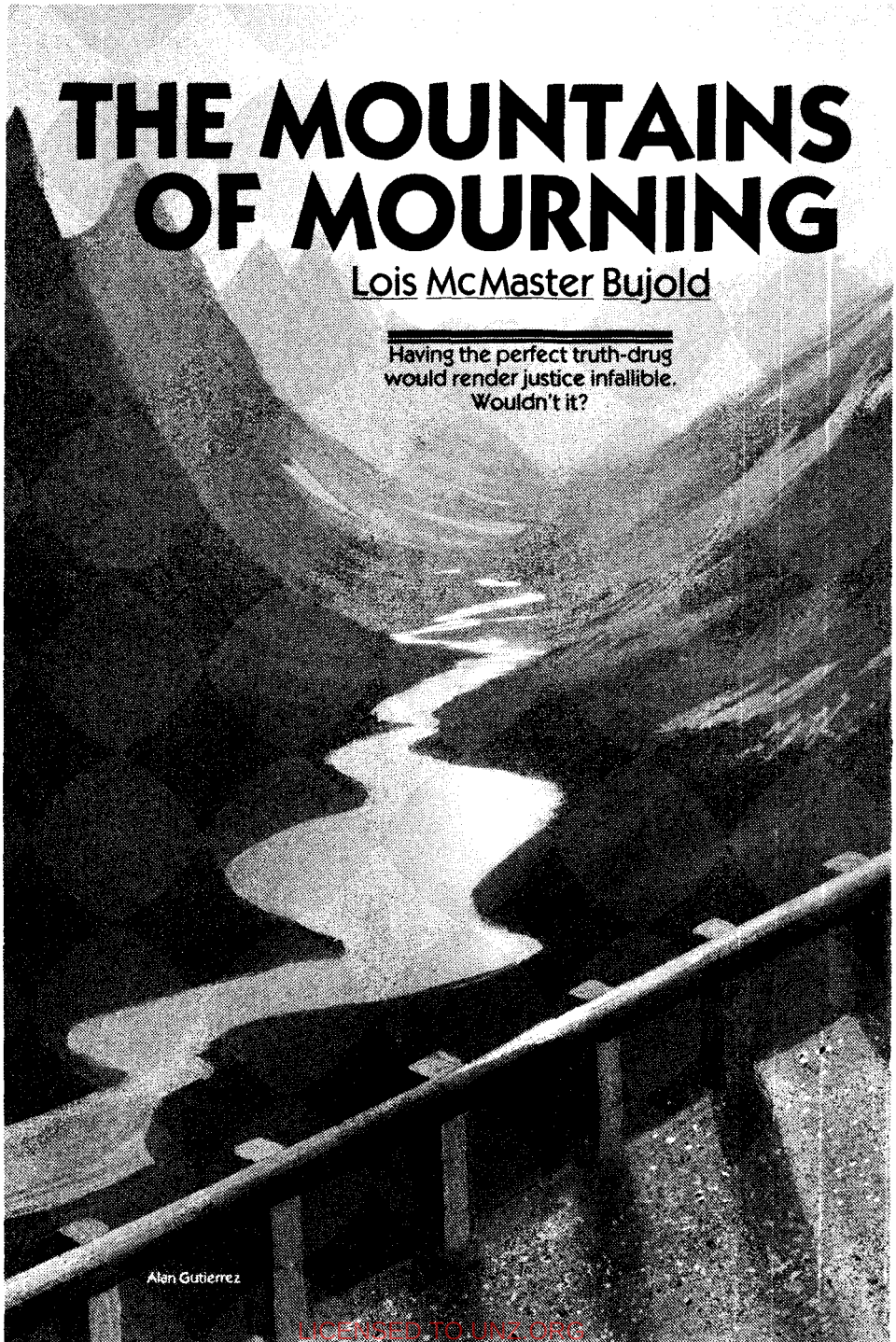
THE MOUNTAINS OF MOURNING

Lois McMaster Bujold

Having the perfect truth-drug would render justice infallible. Wouldn't it?



Alan Gutierrez

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Miles heard the woman weeping as he was climbing the hill from the long lake. He hadn't dried himself after his swim, as the morning already promised shimmering heat. Lake water trickled cool from his hair onto his naked chest and back, more annoyingly down his legs from his ragged shorts. His leg braces chafed on his damp skin as he pistoned up the faint trail through the scrub, military double-time. His feet squished in his old wet shoes. He slowed, curious, as he became conscious of the voices.

The woman's voice grated with grief and exhaustion. "Please, lord, please. All I want is m'justice . . . "

The front gate guard's voice was irritated and embarrassed. "I'm no lord. C'mon, get *up*, woman. Go back to the village and report it at the district magistrate's office."

"I tell you, I just came from there!" The woman did not move from her knees as Miles emerged from the bushes and paused to take in the tableau across the paved road. "The magistrate's not to return for weeks, weeks. I walked four days to get here. I only have a little money. . . . " A desperate hope rose in her voice, and her spine bent and straightened as she scrabbled in her skirt pocket and held out her cupped hands to the guard. "A mark and twenty pence, it's all I have, but—"

The exasperated guard's eye fell on Miles, and he straightened abruptly, as if afraid Miles might suspect him of being tempted by so pitiful a bribe. "Be off, woman!" he snapped.

Miles quirked an eyebrow, and limped across the road to the main gate. "What's all this about, Corporal?" he inquired easily.

The guard corporal was on loan from Imperial Security, and wore the high-necked dress greens of the Barrayaran Service. He was sweating and uncomfortable in the bright morning light of this southern district, but Miles fancied he'd be boiled before he'd undo his collar on this post. His accent was not local, he was a city man from the capital, where a more-or-less efficient bureaucracy absorbed such problems as the one on her knees before him.

The woman, now, was local and more than local—she had backcountry written all over her. She was younger than her strained voice had at first suggested. Tall, fever-red from her weeping, with stringy blonde hair hanging down across a ferret-thin face and protuberant grey eyes. If she were cleaned up, fed, rested, happy and confident, she might achieve a near-prettiness, but she was far from that now, despite her remarkable figure. Lean but full-breasted—no, Miles revised his opinion as he crossed the road and came up to the gate. Her bodice was all blotched with dried milk leaks, though there was no baby in sight. Only temporarily full-breasted. Her worn dress was factory-woven cloth, but hand-sewn, crude and simple. Her feet were bare, thickly-callused, cracked and sore.

"No problem," the guard assured Miles. "Go *away*," he hissed to the woman.

She lurched off her knees and sat stonily.

"I'll call my sergeant," the guard eyed her warily, "and have her removed."

"Wait a moment," said Miles.

She stared up at Miles from her cross-

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legged position, clearly not knowing whether to identify him as hope or not. His clothing, what there was of it, offered her no clue as to what he might be. The rest of him was all too plainly displayed. He jerked up his chin and smiled thinly. Too-large head, too-short neck, back thickened with its crooked spine, crooked legs with their brittle bones too often broken, drawing the eye in their gleaming chromium braces. Were the hill woman standing, the top of his head would barely be even with the top of her shoulder. He waited in boredom for her hand to make the back-country hex sign against evil mutations, but it only jerked and clenched into a fist.

"I must see my lord Count," she said to an uncertain point halfway between Miles and the guard. "It's my right. My daddy, he died in the Service. It's my right."

"Prime Minister Count Vorkosigan," said the guard stiffly, "is at his country estate to rest. If he were working, he'd be back in Vobarr Sultana." The guard looked like he wished *he* were back in Vorbarr Sultana.

The woman seized the pause. "You're only a city man. He's *my* Count. My right."

"What do you want to see Count Vorkosigan for?" asked Miles patiently.

"Murder," growled the girl/woman. The security guard spasmed slightly. "I want to report a murder."

"Shouldn't you report to your village Speaker first?" inquired Miles, with a hand-down gesture to calm the twitching guard.

"I did. He'll do *nothing*." Rage and frustration cracked her voice. "He says it's over and done. He won't write down my accusation, says it's nonsense. It would only make trouble for everybody, he says. I don't care! I want my justice!"

Miles frowned thoughtfully, looking the woman over. The details checked, corroborated her claimed identity, added up to a solid if subliminal sense of authentic truth which perhaps escaped the professionally paranoid security man. "It's true, Corporal," Miles said. "She has a right to appeal, first to the district magistrate, then to the Count's court. And the district magistrate won't be back for two weeks."

This sector of Count Vorkosigan's native district had only one overworked district magistrate, who rode a circuit that included the lakeside village of Vorkosigan Surleau but one day a month. Since the region of the prime minister's country estate was crawling with Imperial Security when the great lord was in residence, and closely monitored even when he was not, prudent troublemakers took their troubles elsewhere.

"Scan her, and let her in," said Miles. "On my authority."

The guard was one of Imperial Security's best, trained to look for assassins in his own shadow. He now looked scandalized, and lowered his voice to Miles. "Sir, if I let every country lunatic wander the estate at will—"

"I'll take her up. I'm going that way."

The guard shrugged helplessly, but stopped short of saluting; Miles was decidedly not in uniform. The gate guard pulled a scanner from his belt and

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made a great show of going over the woman. Miles wondered if he'd have been inspired to harass her with a strip-search without Miles's inhibiting presence. When the guard finished demonstrating how alert, conscientious, and loyal he was, he palmed open the gate's lock, entered the transaction—including the woman's retina scan—into the computer monitor, and stood aside in a pose of rather pointed parade rest. Miles grinned at the silent editorial, and steered the bedraggled woman by the elbow through the gates and up the winding drive.

She twitched away from his touch at the earliest opportunity, yet still refrained from superstitious gestures, eyeing him with a strange and hungry curiosity. Time was, such openly repelled fascination with the peculiarities of his body had driven Miles to grind his teeth; now he could take it with a serene amusement only slightly tinged with acid. They would learn, all of them. They would learn.

"Do you serve Count Vorkosigan, little man?" she asked cautiously.

Miles thought about that one a moment. "Yes," he answered finally. The answer was, after all, true on every level of meaning but the one she'd asked it. He quelled the temptation to tell her he was the court jester. From the look of her, this one's troubles were much worse than his own.

She had apparently not quite believed in her own rightful destiny, despite her mulish determination at the gate, for as they climbed unimpeded toward her goal a nascent panic made her face even more drawn and pale, almost ill. "How—how do I talk to him?" she choked. "Should I curtsey . . . ?" She glanced down at herself as if conscious for the first time of her own dirt and sweat and squalor.

Miles suppressed a facetious set-up starting with, *Kneel and knock your forehead three times on the floor before speaking, that's what the General Staff does*, and said instead, "Just stand up straight and speak the truth. Try to be clear. He'll take it from there. He does not, after all," Miles's lips twitched, "lack experience."

She swallowed.

A hundred years ago, the Vorkosigans's summer retreat had been a guard barracks, part of the outlying fortifications of the great castle on the bluff above the village of Vorkosigan Surleau. The castle was now a burnt-out ruin, and the barracks transformed into a comfortable low stone residence, modernized and remodernized, artistically landscaped and bright with flowers. The arrow slits had been widened into big glass windows overlooking the lake, and comm link antennae bristled from the roof. There was a new guard barracks concealed in the trees downslope, but it had no arrow slits.

A man in the brown-and-silver livery of the Count's personal retainers exited the residence's front door as Miles approached with the strange woman in tow. It was the new man, what was his name? Pym, that was it.

"Where's m'lord Count?" Miles asked him.

"In the upper pavilion, taking breakfast with M'lady." Pym glanced at the woman, waited on Miles in a posture of polite inquiry.

"Ah. Well, this woman has walked

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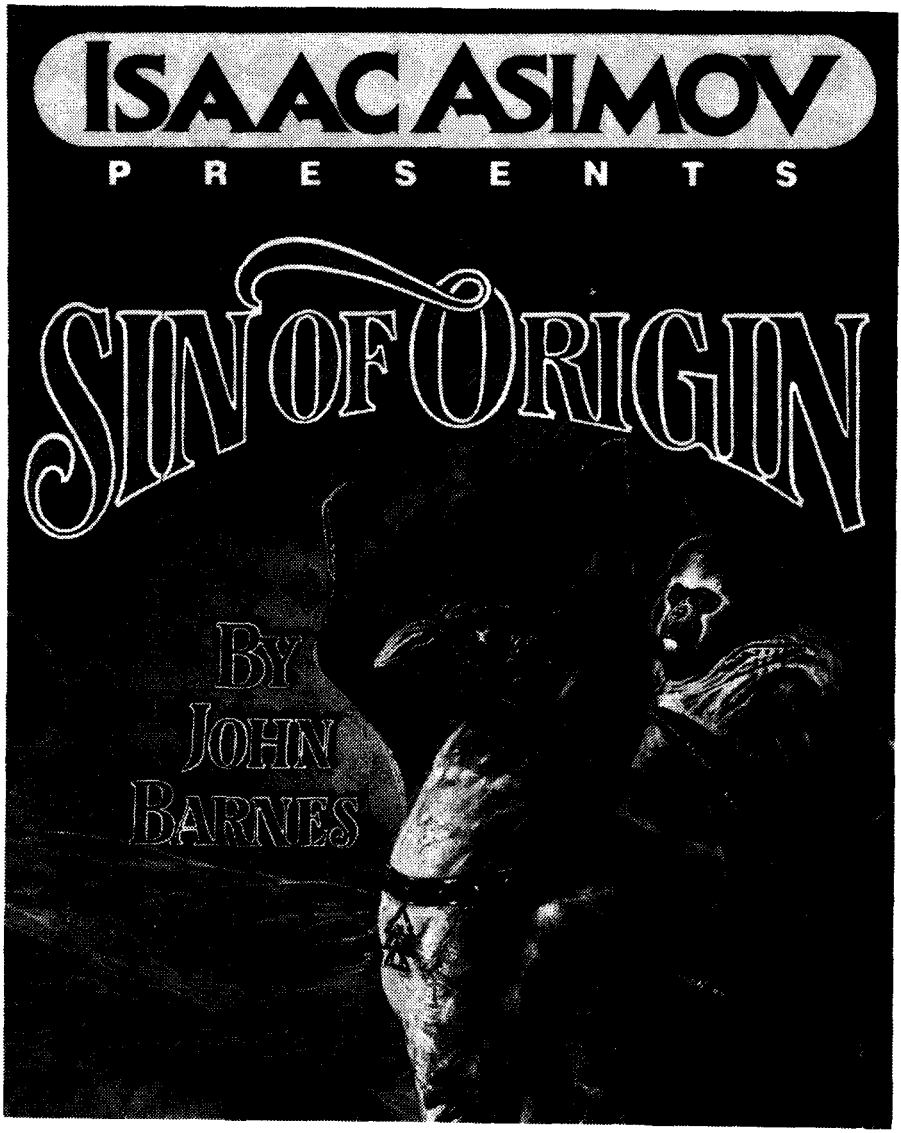

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four days to lay an appeal before the district magistrate's court. The court's not here, but the Count is, so she now proposes to skip the middlemen and go straight to the top. I like her style. Take her up, will you?"

"During *breakfast?*" said Pym.

Miles cocked his head at the woman. "Have you had breakfast?"

She shook her head mutely.

"I thought not." Miles turned his hands palm-out, dumping her, symbolically, on the retainer. "Now, yes."

"My daddy, he died in the Service," the woman repeated faintly. "It's my right." The phrase seemed as much to convince herself as anyone else, now.

Pym was, if not a hill man, district-born. "So it is," he sighed, and gestured her to follow him without further ado. Her eyes widened, as she trailed him around the house, and she glanced back nervously over her shoulder at Miles. "Little man . . . ?"

"Just stand straight," he called to her. He watched her round the corner, grinned, and took the steps two at a time into the residence's main entrance.

After a shave and cold shower, Miles dressed in his own room overlooking the long lake. He dressed with great care, as great as he'd expended on the Service Academy ceremonies and Imperial Review two days ago. Clean underwear, long-sleeved cream shirt, dark green trousers with the side piping. High-collared green tunic tailor-cut to his own difficult fit. New pale blue plastic Ensign rectangles aligned precisely on the collar and poking most uncomfortably into his jaw. He dispensed with the leg braces and pulled on mirror-polished boots to the knee, and swiped a bit of dust from them with his pajama pants, ready-to-hand on the floor where he'd dropped them before going swimming.

He straightened and checked himself in the mirror. His dark hair hadn't even begun to recover from that last cut before the graduation ceremonies. A pale, sharp-featured face, not too much dissipated bag under the grey eyes, nor too bloodshot—alas, the limits of his body compelled him to stop celebrating well before he could hurt himself.

Echoes of the late celebration still boiled up silently in his head, twitching his mouth into a grin. He was on his way now, had his hand clamped firmly around the lowest rung of the highest ladder on Barrayar, Imperial Service itself. There were no give-aways in the Service even for sons of the old Vor. You got what you earned. His brother-officers could be relied on to know that, even if outsiders wondered. He was in position at last to prove himself to all doubters. Up and away and never look down, never look back.

One last look back. As carefully as he'd dressed, Miles gathered up the necessary objects for his task. The white cloth rectangles of his former Academy cadet's rank. The hand-calligraphed second copy, purchased for this purpose, of his new officer's commission in the Barrayaran Imperial Service. A copy of his Academy three-year scholastic transcript on paper, with all its commendations (and demerits). No point in anything but honesty in this next transaction. In a cupboard downstairs he found the brass brazier and tripod, wrapped in its polishing cloth, and a

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plastic bag of very dry juniper bark. Chemical firesticks.

Out the back door and up the hill. The landscaped path split, the right going up the pavilion overlooking it all, the left forking sideways to a garden-like area surrounded by a low fieldstone wall. Miles let himself in by the gate. "Good morning, crazy ancestors," he called, then quelled his humor. It might be true, but lacked the respect due the occasion.

He strolled over and around the graves until he came to the one he sought, knelt, and set up the brazier and tripod, humming. The stone was simple, *General Count Piotr Pierre Vorkosigan*, and the dates. If they'd tried to list all the accumulated honors and accomplishments, they'd have had to go to microprint.

He piled in the bark, the very expensive papers, the cloth bits, a clipped mat of dark hair from that last cut. He set it alight and rocked back on his heels to watch it burn. He'd played a hundred versions of this moment over in his head, over the years, ranging from solemn public orations with musicians in the background, to dancing naked on the old man's grave. He'd settled on this private and traditional ceremony, played straight. Just between the two of them.

"So, Grandfather," he purred at last. "And here we are after all. Satisfied now?"

All the chaos of the graduation ceremonies behind, all the mad efforts of the last three years, all the pain, came to this point; but the grave did not speak, did not say, *Well done; you can stop now*. The ashes spelled out no messages, there were no visions to be had in the rising smoke. The brazier burned down all too quickly. Not enough stuff in it, perhaps.

He stood, and dusted his knees, in the silence and the sunlight. So what had he expected? Applause? Why was he here, in the final analysis? Dancing out a dead man's dreams—who did his service really serve? Grandfather? Himself? Pale Emperor Gregor? Who cared?

"Well, old man," he whispered, then shouted: "ARE YOU SATISFIED YET?" The echoes rang from the stones.

A throat cleared behind him, and Miles whirled like a scalded cat, heart pounding.

"Uh . . . my lord?" said Pym carefully. "Pardon me, I did not mean to interrupt . . . anything. But the Count your father requires you to attend to him in the upper pavilion."

Pym's expression was perfectly bland. Miles swallowed, and waited for the scarlet heat he could feel in his face to recede. "Quite," he shrugged. "The fire's almost out. I'll clean it up later. Don't . . . let anybody else touch it."

He marched past Pym and didn't look back.

The pavilion was a simple structure of weathered silver wood, open on all four sides to catch the breeze, this morning a few faint puffs from the west. Good sailing on the lake this afternoon, maybe. Only ten days of precious home leave left, and much Miles wanted to do, including the trip to Vorbarr Sultana with his cousin Ivan to pick out his new lightflyer. And then his first assignment would be coming through—ship duty, Miles prayed. He'd had to overcome a major temptation, not to ask his father

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to make sure it was ship duty. He would take whatever assignment fate dealt him, that was the first rule of the game. And win with the hand he was dealt.

The interior of the pavilion was shady and cool after the glare outside. It was furnished with comfortable old chairs and tables, one of which bore the remains of a noble breakfast—Miles mentally marked two lonely-looking oil cakes, on a crumb-scattered tray, as his own. Miles's mother, lingering over her cup, smiled across the table at him.

Miles's father, casually dressed in an open-throated shirt and shorts, sat in a worn armchair. Aral Vorkosigan was a thick-set, grey-haired man, heavy-jawed, heavy-browed, scarred. A face that lent itself to savage caricature—Miles had seen some, in Opposition press, in the histories of Barrayar's enemies. They had only to draw one lie, to render dull those sharp penetrating eyes, to create everyone's parody of a military dictator.

And how much is he haunted by Grandfather? Miles wondered. He doesn't show it much. But then, he doesn't have to. Admiral Aral Vorkosigan, space master strategist, conquerer of Komarr, hero of Escobar, for sixteen years Imperial Regent and supreme power on Barrayar in all but name. And then he'd capped it, confounded history and all self-sure witnesses and heaped up honor and glory beyond all that had gone before by voluntarily stepping *down*, and transferring command smoothly to Emperor Gregor upon his majority. Not that the Prime Ministership hadn't made a dandy retirement from the Regency, and he was showing no signs yet of stepping down from *that*.

And so Admiral Aral's life took General Piotr's like an overpowering hand of cards, and where did that leave Ensign Miles? Holding two deuces and the joker. He must surely either concede or start bluffing like crazy. . . .

The hill woman sat on a hassock, a half-eaten oil cake clutched in her hands, staring open-mouthed at Miles in all his power and polish. As he caught and returned her gaze her lips pressed closed and her eyes lit. Her expression was strange—anger? Exhilaration? Embarassment? Glee? Some bizarre mixture of all? *And what did you think I was, woman?*

Being in uniform (showing off his uniform?), Miles came to attention before his father. "Sir?"

Count Vorkosigan spoke to the woman. "*That* is my son. If I send him as my Voice, would that satisfy you?"

"Oh," she breathed, her wide mouth drawing back in a weird, fierce grin, the most expression Miles had yet seen on her face, "*Yes*, my lord."

"Very well. It will be done."

What will be done? Miles wondered warily. The Count was leaning back in his chair, looking satisfied himself, but with a dangerous tension around his eyes hinting that something had aroused his true anger. Not anger at the woman, clearly they were in some sort of agreement, and—Miles searched his conscience quickly—not at Miles himself. He cleared his throat gently, cocking his head and baring his teeth in an inquiring smile.

The Count steepled his hands and spoke to Miles at last. "A most interesting case. I can see why you sent her up."

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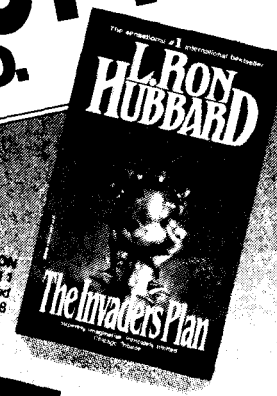

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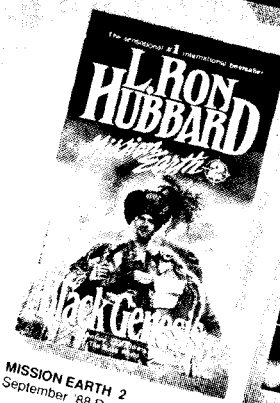

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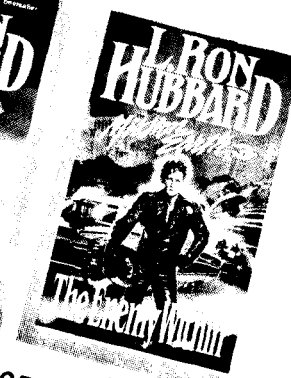

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"Ah . . . " said Miles. What had he got hold of? He'd only greased the woman's way through security on a quixotic impulse, for God's sake, and to tweak his father at breakfast. " . . . ah?" he continued noncommittally.

Count Vorkosigan's brows rose. "Did you not know?"

"She spoke of a murder, and a marked lack of cooperation from her local authorities about it. Figured you'd give her a lift on to the district magistrate."

The Count settled back still further, and rubbed his hand thoughtfully across his scarred chin. "It's an infanticide case."

Miles's belly went cold. *I don't want anything to do with this.* Well, that explained why there was no baby to go with the breasts. "Unusual . . . for it to be reported."

"We've fought the old customs for twenty years and more," said the Count. "Promulgated, propagandized . . . In the cities, we've made good progress."

"In the cities," murmured the Countess, "people have access to alternatives."

"But in the backcountry—well—little has changed. We all know what's going on, but without a report, a complaint — and with the family invariably drawing together to protect its own—it's hard to get leverage."

"What," Miles cleared his throat, nodded at the woman, "what was your baby's mutation?"

"The cat's mouth," the woman dabbed at her upper lip to demonstrate. "She had the hole inside her mouth, too, and was a weak sucker, she choked and cried, but she was getting enough, she *was* . . . "

"Hare-lip," the Count's off-worlder wife murmured half to herself, translating the Barrayaran term to the galactic standard, "and a cleft palate, sounds like. Harra, that's not even a mutation. They had that back on Old Earth. A—a normal birth defect, if that's not a contradiction in terms. Not a punishment for your Barrayaran ancestors' pilgrimage through the Fire. A simple operation could have corrected—" Countess Vorkosigan cut herself off. The hill woman was looking anguished.

"I'd heard," the woman said. "My lord had made a hospital to be built at Hassadar. I meant to take her there, when I was a little stronger, though I had no money. Her arms and legs were sound, her head was well-shaped, anybody could see—surely they would have—" her hands clenched and twisted, her voice went ragged, "but Lem killed her first."

A seven-day walk, Miles calculated, from the deep Dendarii Mountains to the lowland town of Hassadar. Reasonable, that a woman newly risen from child-bed might delay that hike a few days. An hour's ride in an aircar. . . .

"So one is reported as a murder at last," said Count Vorkosigan, "and we will treat it as exactly that. This is a chance to send a message to the farthest corners of my own district. You, Miles, will be my Voice, to reach where it has not reached before. You will dispense Count's justice upon this man—and not quietly, either. It's time for the practices that brand us as barbarians, in galactic eyes, to end."

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Miles gulped. "Wouldn't the district magistrate be better qualified . . . ?"

The Count smiled slightly. "For this case, I can think of no one better qualified than yourself."

The messenger and the message all in one: *Times have changed.* Indeed. Miles wished himself elsewhere, anywhere—back sweating blood over his final examinations, for instance. He stifled an unworthy wail, *My home leave . . . !*

Miles rubbed the back of his neck. "Who, ah . . . who is it killed your little girl?" *Meaning: who is it I'm expected to drag out, put up against a wall, and shoot?*

"My husband," she said tonelessly, looking at—through—the polished silvery floorboards.

I knew this was going to be messy. . . .

"She cried and cried," the woman went on, "and wouldn't go to sleep, not nursing well—he shouted at me to shut her up—"

"Then?" Miles prompted, sick to his stomach.

"He swore at me, and went to go sleep at his mother's. He said at least a working man could sleep there. I hadn't slept either. . . . "

This guy sounds like a real winner. Miles had an instant picture of him, a bull of a man with a bullying manner — nevertheless, there was something missing in the climax of the woman's story.

The Count had picked up on it, too. He was listening with total attention, his strategy-session look, a slit-eyed intensity of thought you could mistake for sleepiness. That would be a grave mistake. "Were you an eyewitness?" he asked in a deceptively mild tone that put Miles on full alert. "Did you actually see him kill her?"

"I found her dead in the midmorning, lord."

"You went into the bedroom—" Count Vorkosigan led her on.

"We've only got one room." She shot him a look as if doubtful for the first time of his total omniscience. "She had slept, slept at last. I went out to get some brillberries, up the ravine a way. And when I came back . . . I should have taken her with me, but I was so glad she slept at last, didn't want to risk waking her—" tears leaked from the woman's tightly-closed eyes. "I let her sleep when I came back, I was glad to eat and rest, but I began to get full," her hand touched a breast, "and I went to wake her . . . "

"What, were there no marks on her? Not a cut throat?" asked the count. That was the usual method for these backcountry infanticides, quick and clean compared to, say, exposure.

The woman shook her head. "Smothered, I think, lord. It was cruel, something cruel. The village Speaker said I must have overlain her, and wouldn't take my plea against Lem. I did not, I did not! She had her own cradle, Lem made it with his own hands when she was still in my belly. . . . " She was close to breaking down.

The Count exchanged a glance with his wife, and a small tilt of his head. Countess Vorkosigan rose smoothly.

"Come, Harra, down to the house. You must wash and rest before Miles takes you home."

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The hill woman looked taken aback. "Oh, not in your house, lady!"

"Sorry, it's the only one I've got handy. Besides the guard barracks. The guards are good boys, but you'd make 'em uncomfortable. . . . " The Countess eased her out.

"It is clear," said Count Vorkosigan as soon as the women were out of earshot, "that you will have to check out the medical facts before, er, popping off. And I trust you will also have noticed the little problem with a positive identification of the accused. This could be the ideal public-demonstration case we want, but not if there's any ambiguity about it. No bloody mysteries."

"I'm not a coroner," Miles pointed out immediately. If he could wriggle off this hook. . . .

"Quite. You will take Dr. Dea with you."

Lieutenant Dea was the prime minister's physician's assistant. Miles had seen him around—an ambitious young military doctor, in a constant state of frustration because his superior would never let him touch his most important patient—oh, he was going to be thrilled with this assignment, Miles predicted morosely.

"He can take his osteo kit with him, too," the Count went brightening slightly, "In case of accidents."

"How economical," said Miles, rolling his eyes. "Look, uh—suppose her story checks out and we nail this guy. Do I have to, personally . . . ?"

"One of the liveried men will be your bodyguard. And—if the story checks —the executioner."

That was only slightly better. "Couldn't we wait for the district magistrate?"

"Every judgment the district magistrate makes, he makes in my place. Every sentence his office carries out, is carried out in my name. Someday, it will be done in your name. It's time you gained a clear understanding of the process. Historically, the Vor may be a military caste, but a Vor lord's duties were never only military ones."

No escape. Damn, damn, damn. Miles sighed. "Right. Well . . . we could take the aircar, I suppose, and be up there in a couple of hours. Allow some time to find the right hole. Drop out of the sky on 'em, make the message loud and clear . . . be back before bedtime." Get it over with quickly.

The Count had that slit-eyed look again. "No . . . " he said slowly, "not the aircar, I don't think."

"No roads for a groundcar, up that far. Just trails." He added uneasily — surely his father could not be thinking of—"I don't think I'd cut a very impressive figure of central Imperial authority on foot, sir."

His father glanced up at his crisp dress uniform and smiled slightly. "Oh, you don't do so badly."

"But picture this after three or four days of beating through the bushes," Miles protested. "You didn't see us in Basic. Or smell us."

"I've been there," said the admiral dryly. "But no, you're quite right. Not on foot. I have a better idea."

My own cavalry troop, thought Miles ironically, turning in his saddle, *just like Grandfather.* Actually, he was pretty sure the old man would have had some

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acerbic comments about the riders now strung out behind Miles on the wooded trail, once he'd got done rolling on the ground laughing at the equitation being displayed. The Vorkosigan stables had shrunk sadly since the old man was no longer around to take an interest: the polo string sold off, the few remaining ancient and ill-tempered ex-cavalry beasts put permanently out to pasture. The handful of riding horses left were retained for their sure-footedness and good manners, not their exotic bloodlines, and kept exercised and gentle for the occasional guest by a gaggle of girls from the village.

Miles gathered his reins, tensed one calf, and shifted his weight slightly, and Fat Ninny responded with a neat half turn and two precise back steps. The thick-set roan gelding could not have been mistaken by the most ignorant urbanite for a fiery steed, but Miles adored him, for his dark and liquid eye, his wide velvet nose, his phlegmatic disposition equally unappalled by rushing streams or screaming aircars, but most of all for his exquisite dressage-trained responsiveness. Brains before beauty. Just being around him made Miles calmer, the beast was an emotional blotter, like a purring cat. Miles patted Fat Ninny on the neck. "If anybody asks," he murmured, "I'll tell them your name is Chieftain." Fat Ninny waggled one fuzzy ear, and heaved a wooshing, barrel-chested sigh.

Grandfather had a great deal to do with the unlikely parade Miles now led. The great guerrilla general had poured out his youth in these mountains, fighting the Cetagandan invaders to a standstill and then reversing their tide. Anti-flyer heatless seeker-strikers, smuggled in at bloody cost from off-planet, had a lot more to do with the final victory than cavalry horses, which, according to Grandfather, had saved his forces through the worst winter of that campaign mainly by being edible. But through retroactive romance, the horse had become the symbol of that struggle.

Miles thought his father was being overly optimistic, if he thought Miles was going to cash in thusly on the old man's residual glory. The guerrilla caches and camps were shapeless lumps of rust and *trees*, dammit, not just weeds and scrub anymore—they had passed some, earlier in today's ride—the men who had fought that war had long since gone to ground for the last time, just like Grandfather. What was he doing here? It was Jump ship duty he wanted, taking him high, high above all this. The future, not the past, held his destiny.

Miles's meditations were interrupted by Dr. Dea's horse, which, taking exception to a branch lying across the logging trail, planted all four feet in an abrupt stop and snorted loudly. Dr. Dea toppled off with a faint cry.

"Hang onto the *reins*," Miles called, and pressed Fat Ninny back down the trail.

Dr. Dea was getting rather better at falling off, he'd landed more-or-less on his feet this time. He made a lunge at the dangling reins, but his sorrel mare shied away from his grab. Dea jumped back as she swung on her haunches and then, realizing her freedom, bounced back down the trail, tail bannering, horse body-language for *Nyah, nyah, ya can't catch me!* Dr. Dea, red and

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furious, ran swearing in pursuit. She broke into a canter.

"No, no, don't run after her!" called Miles.

"How the hell am I supposed to catch her if I don't run after her?" snarled Dea. The space surgeon was not a happy man. "My medkit's on that bloody beast!"

"How do you think you can catch her if you do?" asked Miles. "She can run faster than you can."

At the end of the little column, Pym turned his horse sideways, blocking the trail. "Just wait, Harra," Miles advised the anxious hill woman in passing. "Hold your horse still. Nothing starts a horse running faster than another running horse."

The other two riders were doing rather better. The woman, Harra Csurik, sat her horse wearily, allowing it to plod along without interference, but at least riding on balance instead of trying to use the reins as a handle like the unfortunate Dea. Pym, bringing up the rear, was competent if not comfortable.

Miles slowed Fat Ninny to a walk, reins loose, and wandered after the mare, radiating an air of calm relaxation. *Who, me? I don't want to catch you. We're just enjoying the scenery, right. That's it, stop for a bite.* The sorrel mare paused to nibble at a weed, but kept a wary eye on Miles's approach.

At a distance just short of starting the mare bolting off again, Miles stopped Fat Ninny and slid off. He made no move toward the mare, but instead stood still and made a great show of fishing in his pockets. Fat Ninny butted his head against Miles eagerly, and Miles cooed and fed him a bit of sugar. The mare cocked her ears with interest. Fat Ninny smacked his lips and nudged for more. The mare snuffled up for her share. She lipped a cube from Miles's palm as he slid his other arm quietly through the loop of her reins.

"Here you go, Dr. Dea. One horse. No running."

"No fair," wheezed Dea, trudging up. "You had sugar in your pockets."

"Of course I had sugar in my pockets. It's called foresight and planning. The trick of handling horses isn't to be faster than the horse, or stronger than the horse. That pits your weakness against his strengths. The trick is to be smarter than the horse. That pits your strength against his weakness, eh?"

Dea took his reins. "It's snickering at me," he said suspiciously.

"That's nickering, not snickering," Miles grinned. He tapped Fat Ninny behind his left foreleg, and the horse obediently grunted down onto one knee. Miles clambered up readily to his conveniently-lowered stirrup.

"Does mine do that?" asked Dr. Dea, watching with fascination.

"Sorry, no."

Dea glowered at his horse. "This animal is an idiot. I shall lead it for a while."

As Ninny lurched back to his four feet, Miles suppressed a riding-instructorly comment gleaned from his Grandfather's store such as, *Be smarter than the horse, Dea.* Though Dr. Dea was officially sworn to Lord Vorkosigan for the duration of this investigation, Space Surgeon Lieutenant Dea certainly outranked Ensign Vorkosigan. To command older men who outranked one called for a certain measure of tact.

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The logging road widened out here, and Miles dropped back beside Harra Csurik. Her fierceness and determination of yesterday morning at the gate seemed to be fading even as the trail rose toward her home. Or perhaps it was simply exhaustion catching up with her. She'd said little all morning, been sunk in silence all afternoon. If she was going to drag Miles all the way up to the back of beyond and then wimp out on him . . .

"What, ah, branch of the Service was your father in, Harra?" Miles began conversationally.

She raked her fingers through her hair in a combing gesture more nervousness than vanity. Her eyes looked out at him through the straw-colored wisps like skittish creatures in the protection of a hedge.

"District Militia, m'lord. I don't really remember him, he died when I was real little."

"In combat?"

She nodded. "In the fighting around Vorbarr Sultana, during Vordarian's Pretendership."

Miles refrained from asking which side he had been swept up on—most footsoldiers had had little choice, and the amnesty had included the dead as well as the living.

"Ah . . . do you have any sibs?"

"No, lord. Just me and my mother left."

A little anticipatory tension eased in Miles's neck. If this judgment indeed drove all the way through to an execution, one mis-step could trigger a blood feud among the in-laws. *Not* the legacy of justice the Count intended him to leave behind. So the fewer in-laws involved, the better. "What about your husband's family?"

"He's got seven. Four brothers and three sisters."

"Hm." Miles had a mental flash of an entire team of huge, menacing hill hulks. He glanced back at Pym, feeling a trifle understaffed for his task. He had pointed out this factor to the Count, when they'd been planning this expedition last night.

"The village Speaker and his deputies will be your back-up," the Count had said, "just as for the district magistrate on court circuit."

"What if they don't want to cooperate?" Miles had asked nervously.

"An officer who expects to command Imperial troops," the Count had glinted, "should be able to figure out how to extract cooperation from a backcountry headman."

In other words, his father had decided this was a test, and wasn't going to give him any more clues. Thanks, Dad.

"You have no sibs, lord?" said Harra, snapping him back to the present.

"No. But surely that's known, even in the backbeyond."

"They *say* a lot of things about you," Harra shrugged.

Miles bit down on the morbid question in his mouth like a wedge of raw lemon. He would not ask it, he would not . . . he couldn't help himself. "Like what?" forced out past his stiff lips.

"Everyone knows the Count's son is a mutant." Her eyes flicked defiant-wide. "Some said it came from the off-worlder woman he married. Some said it was from radiation from the wars, or a disease from, um, corrupt practices

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in his youth among his brother-officers—''

That last was a new one to Miles. His brow lifted.

''—but most say he was poisoned by his enemies.''

''I'm glad most have it right. It was an assassination attempt using soltoxin gas, when my mother was pregnant with me. But it's not—'' *a mutation,* his thought hiccoughed through the well-worn grooves—how many times had he explained this?—*it's teratogenic, not genetic, I'm not a mutant, not . . .* What the hell did a fine point of biochemistry matter to this ignorant, bereaved woman? For all practical purposes—for her purposes—he might as well be a mutant. ''—important,'' he finished.

She eyed him sideways, swaying gently in the clop-a-clop rhythm of her mount. ''Some said you were born with no legs, and lived all the time in a float chair in Vorkosigan House. Some said you were born with no bones—''

''—and kept in a jar in the basement, no doubt,'' Miles muttered.

''But Karal said he'd seen you with your grandfather at Hassadar Fair, and you were only sickly and undersized. Some said your father had got you into the Service, but others said no, you'd gone off-planet to your mother's home and had your brain turned into a computer and your body fed with tubes, floating in a liquid—''

''I knew a jar would turn up in this story somewhere,'' Miles grimaced. *You knew you'd be sorry you asked, too, but you went and did it anyway.* She was baiting him, Miles realized suddenly. How *dare* she . . . but there was no humor in her, only a sharp-edged watchfulness.

She had gone out, way out, on a limb to lay this murder charge, in defiance of family and local authorities alike, in defiance of established custom. And what had her Count given her for a shield and support, going back to face the wrath of all her nearest and dearest? Miles. Could he handle this? She must be wondering, indeed. Or would he botch it, cave and cut and run, leaving her to face the whirlwind of rage and revenge alone?

He wished he'd left her weeping at the gate.

The woodland, fruit of many generations of terraforming forestry, opened out suddenly on a vale of brown native scrub. Down the middle of it, through some accident of soil chemistry, ran a half-kilometer-wide swathe of green and pink—feral roses, Miles realized with astonishment as they rode nearer. Earth roses. The track dove into the fragrant mass of them and vanished.

He took turns with Pym, hacking their way through with their Service bush knives. The roses were vigorous and studded with thick thorns, and hacked back with a vicious elastic recoil. Fat Ninny did his part by swinging his big head back and forth and nipping off blooms and chomping them down happily. Miles wasn't sure just how many he ought to let the big roan eat—just because the species wasn't native to Barrayar didn't mean it wasn't poisonous to horses. Miles sucked at his wounds and reflected upon Barrayar's shattered ecological history.

The fifty thousand Firsters from Earth had only meant to be the spearhead of

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Barrayar's colonization. Then, through a gravitational anomaly, the wormhole jump through which the colonists had come shifted closed, irrevocably and without warning. The terraforming which had begun, so careful and controlled in the beginning, collapsed along with everything else. Imported Earth plant and animal species had escaped everywhere to run wild, as the humans turned their attention to the most urgent problems of survival. Biologists still mourned the mass extinctions of native species that had followed, the erosions and droughts and floods, but really, Miles thought, over the centuries of the Time of Isolation the fittest of both worlds had fought it out to a perfectly good new balance. If it was alive and covered the ground who cared where it came from?

We are all here by accident. Like the roses.

They camped that night high in the hills, and pushed on in the morning to the flanks of the true mountains. They were now out of the region Miles was personally familiar with from his childhood, and he checked Harra's directions frequently on his orbital survey map. They stopped only a few hours short of their goal at sunset of the second day. Harra insisted she could lead them on in the dusk from here, but Miles did not care to arrive after nightfall, unannounced, in a strange place of uncertain welcome.

He bathed the next morning in a stream, and unpacked and dressed carefully in his new officer's Imperial dress greens. Pym wore the Vorkosigan brown-and-silver livery, and pulled the Count's standard on a telescoping aluminum pole from the recesses of his saddlebag and mounted it on his left stirrup. *Dressed to kill,* thought Miles joylessly. Dr. Dea wore ordinary black fatigues and looked uncomfortable. If they constituted a message, Miles was damned if he knew what it was.

They pulled the horses up at midmorning before a two-room cabin set on the edge of a vast grove of sugar maples, planted who-knew-how-many centuries ago but now raggedly marching up the vale by self-seeding. The mountain air was cool and pure and bright. A few chickens stalked and bobbed in the weeds. An algae-choked wooden pipe from the woods dribbled water into a trough, which overflowed into a squishy green streamlet and away.

Harra slid down, smoothed her skirt, and climbed the porch. "Karal?" she called. Miles waited high on horseback for the initial contact. Never give up a psychological advantage.

"Harra? Is that you?" came a man's voice from within. He banged open the door and rushed out. "Where have you been, girl? We've been beating the bushes for you! Thought you'd broke your neck in the scrub somewhere—" he stopped short before the three silent men on horseback.

"You wouldn't write down my charges, Karal," said Harra rather breathlessly. Her hands kneaded her skirt. "So I walked to the district magistrate at Vorkosigan Surleau to Speak them myself."

"Oh, girl," Karal breathed regretfully, "that was a *stupid* thing to do. . . ." His head lowered and swayed, as he stared uneasily at the riders. He was a balding man of maybe sixty,

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leathery and worn, and his left arm ended in a stump. Another veteran.

"Speaker Serg Karal?" began Miles sternly. "I am the Voice of Count Vorkosigan. I am charged to investigate the crime Spoken by Harra Csurik before the Count's court, namely the murder of her infant daughter Raina. As Speaker of Silvy Vale, you are requested and required to assist me in all matters pertaining to the Count's justice."

At this point Miles ran out of prescribed formalities, and was on his own. That hadn't taken long. He waited. Fat Ninny snuffled. The silver-on-brown cloth of the standard made a few soft snapping sounds, lifted by a vagrant breeze.

"The district magistrate wasn't there," put in Harra, "but the Count was."

Karal was grey-faced, staring. He pulled himself together with an effort, came to a species of attention, and essayed a creaking half-bow. "Who—who are you, sir?"

"Lord Miles Vorkosigan."

Karal's lips moved silently. Miles was no lip reader, but he was pretty sure it came to a dismayed variant of *Oh, shit*. "This is my liveried man Sergeant Pym, and my medical examiner, Lieutenant Dea of the Imperial Service."

"You are my lord Count's son?" Karal croaked.

"The one and only." Miles was suddenly sick of the posing. Surely that was a sufficient first impression. He swung down off Ninny, landing lightly on the balls of his feet. Karal's gaze followed him down, and down. *Yeah, so I'm short. But wait'll you see me dance.* "All right if we water our horses in your trough, here?" Miles looped Ninny's reins through his arm and stepped toward it.

"Uh, that's for the people, m'lord," said Karal. "Just a minute and I'll fetch a bucket." He hitched up his baggy trousers and trotted off around the side of the cabin. A minute's uncomfortable silence, then Karal's voice floating faintly, "Where'd you put the goat bucket, Zed?"

Another voice, light and young, "Behind the woodstack, Da." The voices fell to a muffled undertone. Karal came trotting back with a battered aluminum bucket, which he placed beside the trough. He knocked out a wooden plug in the side and a bright stream arced out to plash and fill. Fat Ninny flickered his ears and snuffled and rubbed his big head against Miles, smearing his tunic with red and white horsehairs and nearly knocking him off his feet. Karal glanced up and smiled at the horse, though his smile fell away as his gaze passed on to the horse's owner. As Fat Ninny gulped his drink Miles caught a glimpse of the owner of the second voice, a boy of around twelve who flitted off into the woods behind the cabin.

Karal fell to, assisting Miles and Harra and Pym in securing the horses. Miles left Pym to unsaddle and feed, and followed Karal into his house. Harra stuck to Miles like glue, and Dr. Dea unpacked his medical kit and trailed along. Miles's boots rang loud and unevenly on the wooden floorboards.

"My wife, she'll be back in the nooning," said Karal, moving uncertainly around the room as Miles and Dea settled themselves on a bench and Harra curled up with her arms around her knees on the floor beside the fieldstone

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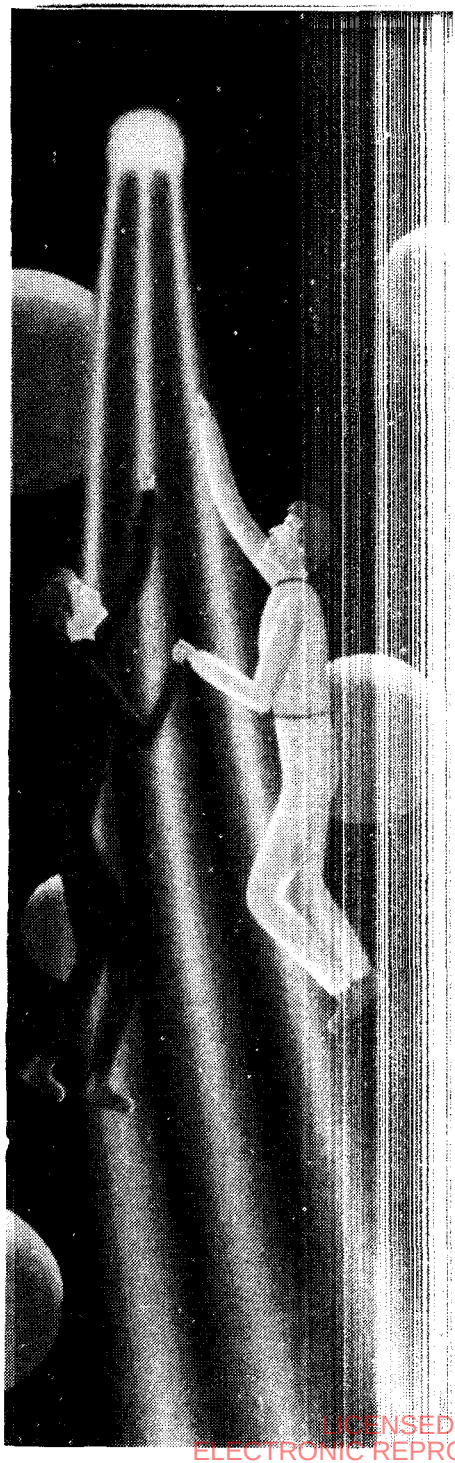

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hearth. "I'll . . . I'll make some tea, m'lord." He skittered back out the door to fill a kettle at the trough before Miles could say, *No, thank you.* No, let him ease his nerves in ordinary movements. Then maybe Miles could begin to tease out how much of this static was social nervousness and how much was (perhaps) guilty conscience. By the time Karal had the kettle on the coals he was noticably better controlled, so Miles began.

"I'd prefer to commence this investigation immediately, Speaker. It need not take long."

"It need not . . . take place at all, m'lord. The baby's death was natural — there were no marks on her. She was weakly, she had the cat's mouth, who knows what else was wrong with her? She died in her sleep, or by some accident."

"It is remarkable," said Miles dryly, "how often such accidents happen in this district. My father, the Count himself, has . . . remarked on it."

"There was no call to drag you up here." Karal looked exasperation at Harra. She sat silent, unmoved by his persuasion.

"It was no problem," said Miles blandly.

"Truly, m'lord," Karal lowered his voice, "I believe the child might have been overlain. 'S no wonder, in her grief, that her mind rejected it. Lem Csurik, he's a good boy, a good provider. She really doesn't want to do this, her reason is just temporarily overset by her troubles."

Harra's eyes, looking up from her hair-thatch, were poisonously cold.

"I begin to see," Miles's voice was mild, encouraging.

Karal brightened slightly. "It all could still be all right. If she will just be patient. Get over her sorrow. Talk to poor Lem. I'm sure he didn't kill the babe. Not rush to something she'll regret."

"I begin to see," Miles let his tone go ice cool, "why Harra Csurik found it necessary to walk four days to get an unbiased hearing. 'You think.' 'You believe.' 'Who knows what?' Not you, it appears. I hear speculation—accusation — innuendo—assertion. I came for *facts*, Speaker Karal. The Count's justice doesn't turn on guesses. It doesn't have to. This isn't the Time of Isolation. Not even in the backbeyond.

"My investigation of the facts will begin now. No judgment will be—rushed into, before the facts are complete. Confirmation of Lem Csurik's guilt or innocence will come from his own mouth, under fast-penta, administered by Dr. Dea before two witnesses—yourself and a deputy of your choice. Simple, clean, and quick." *And maybe I can be on my way out of this benighted hole before sundown.* "I require you, Speaker, to go now and bring Lem Csurik for questioning. Sergeant Pym will assist you."

Karal killed another moment pouring the boiling water into a big brown pot before speaking. "I'm a traveled man, lord. A twenty-year Service man. But most folks here have never been out of Silvy Vale. Interrogation chemistry might as well be magic to them. They might say it was a false confession, got that way."

"Then you and your deputy can say otherwise. This isn't exactly like the

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good old days, when confessions were extracted under torture, Karal. Besides, if he's as innocent as you *guess*—he'll clear himself, no?"

Reluctantly, Karal went into the adjoining room. He came back shrugging on a faded Imperial Service uniform jacket with a corporal's rank marked on the collar, the buttons of which did not quite meet across his middle anymore. Preserved, evidently, for such official functions. Even as in Barrayaran custom one saluted the uniform, and not the man in it, so might the wrath engendered by an unpopular duty fall on the office and not the individual who carried it out. Miles appreciated the nuance.

Karal paused at the door. Harra still sat wrapped in silence by the hearth, rocking slightly.

"M'lord," said Karal. "I've been Speaker of Silvy Vale for sixteen years now. In all that time nobody has had to go to the district magistrate for a Speaking, not for water rights or stolen animals or swiving or even the time Neva accused Bors of tree piracy over the maple sap. We've not had a blood feud in all that time."

"I have no intention of starting a blood feud, Karal. I just want the facts."

"That's the thing, m'lord. I'm not so in love with facts as I used to be. Sometimes, they bite." Karal's eyes were urgent.

Really, the man was doing everything but stand on his head and juggle cats—one-handed—to divert Miles. How overt was his obstruction likely to get?

"Silvy Vale cannot be permitted to have its own little Time of Isolation," said Miles warningly. "The Count's justice is for everyone, now. Even if they're small. And weakly. And have something wrong with them. And cannot even speak for themselves — *Speaker*."

Karal flinched, white about the lips—point taken, evidently. He trudged away up the trail, Pym following watchfully, one hand loosening the stunner in his holster.

They drank the tea while they waited, and Miles pottered about the cabin, looking but not touching. The hearth was the sole source of heat for cooking and wash-water. There was a beaten metal sink for washing up, filled by hand, from a covered bucket, but emptied through a drainpipe under the porch to join the streamlet running down out of the trough. The second room was a bedroom, with a double bed and chests for storage. A loft held three more pallets, the boy around back had brothers, apparently. The place was cramped, but swept, things put away and hung up.

On a side table sat a government-issue audio receiver, and a second and older military model, opened up, apparently in the process of getting minor repairs and a new power pack. Exploration revealed a drawer full of old parts, nothing more complex than for simple audio sets, unfortunately. Speaker Karal must double as Silvy Vale's comm link specialist, how appropriate. They must pick up broadcasts from the station in Hassadar, maybe the high-power government channels from the capital as well.

No other electricity, of course. Powersat receptors were expensive pieces of precision technology. They would come even here, in time; some communities almost as small, but with

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strong economic co-ops already had them. Silvy Vale was obviously still stuck in subsistence-level, and must needs wait till there was enough surplus in the district to gift them, if the surplus was not grabbed off first by some competing want. If only the city of Vorkosigan Vashnoi had not been obliterated by Cetagandan atomics, the whole district could be years ahead, economically. . . .

Miles walked out on the porch and leaned on the rail. Karal's son had returned. Down at the end of the cleared yard Fat Ninny was standing tethered, hip-shot, ears aflop, grunting with pleasure as the grinning boy scratched him vigorously under his halter. The boy looked up to catch Miles watching him, and scooted off fearfully to vanish again in the scrub downslope. "Huh," muttered Miles.

Dr. Dea joined him. "They've been gone a long time. About time to break out the fast-penta?"

"No, your autopsy kit, I should say. I fancy that's what we'll be doing next."

Dea glanced at him sharply. "I thought you sent Pym along to enforce the arrest."

"You can't arrest a man who's not there. Are you a wagering man, Doctor? I'll bet you a mark they don't come back with Csurik. No, hold it—maybe I'm wrong. I hope I'm wrong. Here are three coming back. . . ."

Karal, Pym, and another were marching down the trail. The third was a hulking young man, big-handed, heavy-browed, thick-necked, surly. "Harra," Miles called, "is this your husband?" He looked the part, by God, just what Miles had pictured. And four brothers just like him—only bigger, no doubt.

Harra appeared by Miles's shoulder, and let out her breath. "No, m'lord. That's Alex, the Speaker's deputy."

"Oh." Miles's lips twitched in silent frustration. *Well, I had to give it a chance to be simple.*

Karal stopped beneath him and began a wandering explanation of his empty-handed state. Miles cut him off with a lift of his eyebrows. "Pym?"

"Bolted, m'lord," said Pym laconically. "Almost certainly warned."

"I agree." He frowned down at Karal, who prudently stood silent. Facts first. Decisions, such as how much deadly force to pursue the fugitive with, second. "Harra. How far is it to your burying place?"

"Down by the stream, lord, at the bottom of the valley. About two kilometers."

"Get your kit, Doctor, we're taking a walk. Karal, fetch a shovel."

"M'lord, surely it isn't needful to disturb the peace of the dead," began Karal.

"It is entirely needful. There's a place for the autopsy report right in the Procedural I got from the district magistrate's office. Where I will file my completed report upon this case when we return to Vorkosigan Surleau. I have permission from the next-of-kin—do I not, Harra?"

She nodded numbly.

"I have the two requisite witnesses, yourself and your," *gorilla*, "deputy, we have the doctor and the daylight—if you don't stand there arguing till sundown. All we need is the shovel. Unless you're volunteering to dig with your

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hand, Karal." Miles's voice was flat and grating and getting dangerous.

Karal's balding head bobbed in his distress. "The—the father is the legal next-of-kin, while he lives, and you don't have his—"

"Karal." said Miles.

"M'lord?"

"Take care the grave you dig is not your own. You've got one foot in it already."

Karal's hand opened in despair. "I'll . . . get the shovel, m'lord."

The mid-afternoon was warm, the air golden and summer-sleepy. The shovel bit with a steady *scrunch-scrunch* through the soil at the hands of Karal's deputy. Downslope, a bright stream burbled away over clean rounded stones. Harra hunkered watching, silent and grim.

When big Alex levered out the little crate—so little!—Sergeant Pym went off for a patrol of the wooded perimeter. Miles didn't blame him. He hoped the soil at that depth had been cool, these last eight days. Alex pried open the box, and Dr. Dea waved him away and took over. The deputy, too, went off to find something to look at at the far end of the graveyard.

Dea looked the cloth-wrapped bundle over carefully, lifted it out and set it on his tarp laid out on the ground in the bright sun. The instruments of his investigation were arrayed upon the plastic in precise order. He unwrapped the brightly-patterned cloths in their special folds, and Harra crept up to retrieve them, straighten and fold them ready for reuse, then crept back.

Miles fingered the handkerchief in his pocket, ready to hold over his mouth and nose, and went to watch over Dea's shoulder. Bad, but not too bad. He'd seen and smelled worse. Dea, filter-masked, spoke procedurals into his recorder, hovering in the air by his shoulder, and made his examination first by eye and gloved touch, then by scanner.

"Here, my lord," said Dea, and motioned Miles closer. "Almost certainly the cause of death, though I'll run the toxin tests in a moment. Her neck was broken. See here on the scanner where the spinal cord was severed, then the bones twisted back into alignment."

"Karal, Alex," Miles motioned them up to witness; they came reluctantly.

"Could this have been accidental?" said Miles.

"Very remotely possible. The realignment had to be deliberate though."

"Would it have taken long?"

"Seconds only. Death was immediate."

"How much physical strength was required? A big man's or . . . "

"Oh, not much at all. Any adult could have done it, easily."

"Any sufficiently motivated adult." Miles's stomach churned at the mental picture Dea's words conjured up. The little fuzzy head would easily fit under a man's hand. The twist, the muffled cartilaginous crack—if there was one thing Miles knew by heart, it was the exact tactile sensation of breaking bone, oh yes.

"Motivation," said Dea, "is not my department." He paused. "I might note, a careful external examination could have found this. Mine did. An experienced layman—" his eye fell cool on Karal, "paying attention to what he was doing, should not have missed it."

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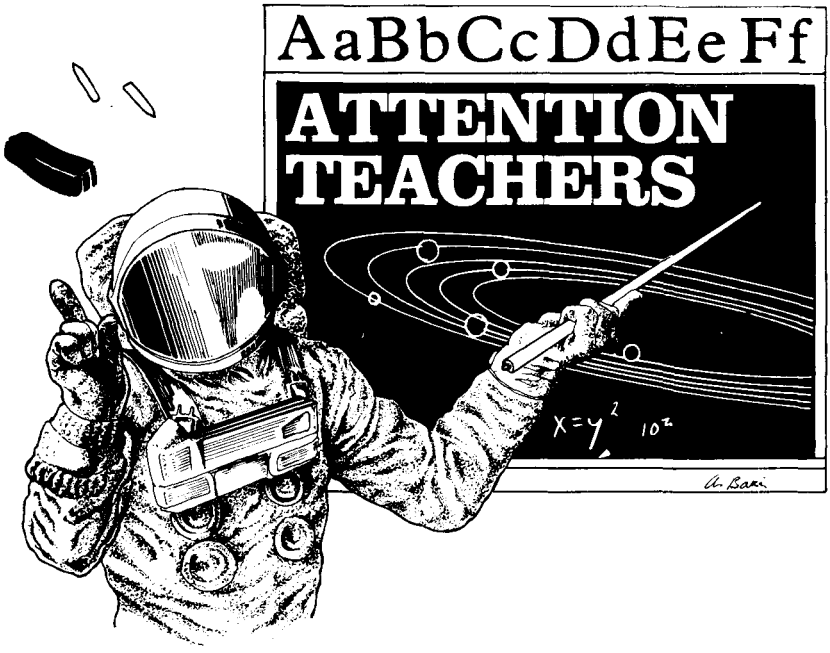

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AFF1

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Miles, too, stared at Karal, waiting.

"Overlain," hissed Harra. Her voice was ragged with scorn.

"M'lord," said Karal carefully, "it's true I suspected the possibility—"

Suspected, hell. You knew.

"But I felt—and still feel, strongly," his eye flashed a wary defiance, "that only more grief would come from a fuss. There was nothing I could do to help the baby at that point. My duties are to the living."

"So are mine, Speaker Karal. As, for example, my duty to the next small Imperial subject in mortal danger from those who should be his or her protectors, for the grave fault of being," Miles flashed an edged smile, "physically different. In Count Vorkosigan's view this is not just a case. This is a test case, fulcrum of a thousand cases. Fuss . . . " he hissed the sibilant; Harra rocked to the rhythm of his voice, "you haven't begun to see *fuss* yet."

Karal subsided as if folded.

There followed an hour of messiness yielding mainly negative data; no other bones were broken, the infant's lungs were clear, her gut and bloodstream free of toxins except those of natural decomposition. Her brain held no secret tumors. The defect for which she had died did not extend to spina bifida, Dea reported. Fairly simple plastic surgery would indeed have corrected the cat's mouth, could she somehow have won access to it. Miles wondered what comfort this confirmation was to Harra; cold, at best.

Dea put his puzzle back together, and Harra rewrapped the tiny body in intricate, meaningful folds. Dea cleaned his tools and placed them in their cases and washed his hands and arms and face thoroughly in the stream, for rather a longer time than needed for just hygiene Miles thought, while the gorilla reburied the box.

Harra made a little bowl in the dirt atop the grave, and piled in some twigs and bark scraps and a sawed-off strand of her lank hair.

Miles, caught short, felt in his pockets. "I have no offering on me that will burn," he said apologetically.

Harra glanced up, surprised at even the implied offer. "No matter, m'lord." Her little pile of scraps flared briefly and went out, like her infant Raina's life.

But it does matter, thought Miles.

Peace to you, small lady, after our rude invasions. I will give you a better sacrifice, I swear by my word as Vorkosigan. And the smoke of that burning will rise and be seen from one end of these mountains to the other.

Miles charged Karal and Alex directly with producing Lem Csurik, and gave Harra Csurik a ride home up behind him on Fat Ninny. Pym accompanied them.

They passed a few scattered cabins on the way. At one a couple of grubby children playing in the yard loped alongside the horses, giggling and making hex signs at Miles, egging each other on to bolder displays, until their mother spotted them and ran out and hustled them indoors, with a fearful look over her shoulder. In a weird way it was almost relaxing to Miles, the welcome he'd expected, not like Karal's and Alex's strained, self-conscious, careful

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not-noticing. Raina's life would not have been an easy one.

Harra's cabin was at the head of a long draw, just before it narrowed into a ravine. It seemed very quiet and isolated, in the dappled shade.

"Are you sure you wouldn't rather go stay with your mother?" asked Miles dubiously.

Harra shook her head. She slid down off Ninny, and Miles and Pym dismounted and followed her in.

The cabin was of standard design, a single room with a fieldstone fireplace and a wide roofed front porch. Water apparently came from the rivulet in the ravine. Pym held up a hand and entered first behind Harra, his hand on his stunner. If Lem Csurik had run, might he have run home first? Pym had been making scanner checks of perfectly innocent clumps of bushes all the way here.

The cabin was deserted. Although not long deserted; it did not have the lingering, dusty silence one would expect of eight days mournful unoccupation. The remains of a few hasty meals sat on the sinkboard. The bed was slept-in, rumpled and unmade. A few man's garments were scattered about. Automatically, Harra began to move about the room, straightening it up, reasserting her presence, her existence, her worth. If she could not control the events of her life, at least she might control one small room.

The one untouched item was a cradle that sat beside the bed, little blankets neatly folded. Harra had fled for Vorkosigan Surleau just a few hours after the burial.

Miles wandered about the room, checking the view from the windows. "Will you show me where you went to get your brillberries, Harra?"

She led them up the ravine; Miles timed the hike. Pym divided his attention unhappily between the brush and Miles, alert to catch any bone-breaking stumble. After flinching away from about three aborted protective grabs, Miles was ready to tell him to go climb a tree. Still, there was a certain understandable self-interest at work here, if Miles broke a leg it would be Pym who'd be stuck with carrying him out.

The brillberry patch was nearly a kilometer up the ravine. Miles plucked a few seedy red berries and ate them absently, looking around, while Harra and Pym waited respectfully. Afternoon sun slanted through green and brown leaves, but the bottom of the ravine was already grey and cool with premature twilight. The brillberry vines clung to the rocks and hung down invitingly, luring one to risk one's neck reaching. Miles resisted their weedy temptations, not being all that fond of brillberries. "If someone called out from your cabin, you couldn't hear them up here, could you?" remarked Miles.

"No, m'lord."

"About how long did you spend picking?"

"About," Harra shrugged, "a basketful."

The woman didn't own a chrono. "An hour, say. And a twenty-minute climb each way. About a two hour time window, that morning. Your cabin was not locked?"

"Just a latch, m'lord."

"Hm."

Method, motive, and opportunity, the

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district magistrate's Procedural had emphasized. Damn. The method was established, and almost anybody could have used it. The opportunity angle, it appeared, was just as bad. Anyone at all could have walked up to that cabin, done the deed, and departed, unseen and unheard. It was much too late for an aura detector to be of use, tracing the shining ghosts of movements in and out of that room, even if Miles had brought one.

Facts, hah. They were back to motive, the murky workings of men's minds. Anybody's guess.

Miles had, as per the instructions in the district magistrate's Procedural, been striving to keep an open mind about the accused, but it was getting harder and harder to resist Harra's assertions. She'd been proved right about everything so far.

They left Harra reinstalled in her little home, going through the motions of order and the normal routine of life as if they could somehow recreate it, like an act of sympathetic magic.

"Are you sure you'll be all right?" Miles asked, gathering Fat Ninny's reins and settling himself in the saddle. "I can't help but think that if your husband's in the area, he could show up here. You say nothing's been taken, so it's unlikely he's been here and gone before we arrived. Do you want someone to stay with you?"

"No, m'lord." She hugged her broom, on the porch. "I'd . . . I'd like to be alone for a while."

"Well . . . all right. I'll, ah, send you a message if anything important happens."

"Thank you, m'lord." Her tone was unpressing; she really did want to be left alone. Miles took the hint.

At a wide place in the trail back to Speaker Karal's, Pym and Miles rode stirrup to stirrup. Pym was still painfully on the alert for boogies in the bushes.

"My lord, may I suggest that your next logical step be to draft all the able-bodied men in the community for a hunt for this Csurik? Beyond doubt, you've established that the infanticide was a murder."

Interesting turn of phrase, Miles thought dryly. *Even Pym doesn't find it redundant. Oh, my poor Barrayar.* "It seems reasonable at first glance, Sergeant Pym, but has it ocurred to you that half the able-bodied men in this community are probably relatives of Lem Csurik's?"

"It might have a psychological effect. Create enough disruption, and perhaps someone would turn him in just to get it over with."

"Hm, possibly. Assuming he hasn't already left the area. He could have been halfway to the coast before we were done at the autopsy."

"Only if he had access to transport." Pym glanced at the empty sky.

"For all we know one of his sub-cousins had a rickety lightflyer in a shed somewhere. But . . . he's never been out of Silvy Vale. I'm not sure he'd know how to run, where to go. Well, if he has left the district it's a problem for Imperial Civil Security, and I'm off the hook." Happy thought. "But—one of the things that bothers me, a lot, are the inconsistencies in the picture I'm getting of our chief suspect. Have you noticed them?"

"Can't say as I have, m'lord."

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"Hm. Where did Karal take you, by the way, to arrest this guy?"

"To a wild area, rough scrub and gullies. Half a dozen men were out searching for Harra. They'd just called off their search and were on their way back when we met up with them. By which I concluded our arrival was no surprise."

"Had Csurik actually been there, and fled, or was Karal just ring-leading you in a circle?"

"I think he'd actually been there, m'lord. The men claimed not, but as you point out they were relatives, and besides, they did not, ah, lie well. They were tense. Karal may begrudge you his cooperation, but I don't think he'll quite dare disobey your direct orders. He is a twenty-year man, after all."

Like Pym himself, Miles thought. Count Vorkosigan's personal guard was legally limited to a ceremonial twenty men, but given his political position their function included very practical security. Pym was typical of their number, a decorated veteran of the Imperial Service who had retired to this elite private force. It was not Pym's fault that when he had joined he had stepped into a dead man's shoes, replacing the late Sergeant Bothari. Did anyone in the universe, besides himself, miss the deadly and difficult Bothari? Miles wondered sadly.

"I'd like to question *Karal* under fast-penta," said Miles morosely. "He displays every sign of being a man who knows where the body's buried."

"Why don't you, then?" asked Pym logically.

"I may come to that. There is, however, a certain unavoidable degradation in a fast-penta interrogation. If the man's loyal it may not be in our best long-range interest to shame him publicly."

"It wouldn't be in public."

"No, but he would remember being turned into a drooling idiot. I need . . . more information."

Pym glanced back over his shoulder. "I thought you had all the information, by now."

"I have facts. Physical facts. A great big pile of—meaningless, useless facts." Miles brooded. "If I have to fast-penta every backbeyonder in Silvy Vale to get to the bottom of this, I will. But it's not an elegant solution."

"It's not an elegant problem, m'lord," said Pym, dryly.

They returned to find Speaker Karal's wife back and in full possession of her home. She was running in frantic circles, chopping, beating, kneading, stoking, and flying upstairs to change the bedding on the three pallets, driving her three sons before her to fetch and run and carry. Dr. Dea, bemused, was following her about trying to slow her down, explaining that they had brought their own tent and food, thank you, and that her hospitality was not required. This produced a most indignant response from Ma Karal.

"My lord's own son comes to my house, and I to turn him out in the fields like his horse! I'd be ashamed!" And she returned to her work.

"She seems rather distraught," said Dea, looking over his shoulder.

Miles took him by the elbow and propelled him out onto the porch. "Just get out of her way, Doctor. We're doomed

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to be Entertained. It's an obligation on both sides. The polite thing to do is sort of pretend we're not here till she's ready for us."

Dea lowered his voice. "It might be better, in light of the circumstances, if we were to eat only our packaged food."

The chatter of a chopping knife, and a scent of herbs and onions, wafted enticingly through the open window. "Oh, I would imagine anything out of the common pot would be all right, wouldn't you?" said Miles. "If anything really worries you, you can wisk it off and check it, I suppose, but—discreetly, eh? We don't want to insult anyone."

They settled themselves in the homemade wooden chairs, and were promptly served tea, again, by a boy draftee of ten, Karal's youngest. He had apparently already received private instructions in manners from one or the other of his parents, for his response to Miles's deformities was the same flickering covert not-noticing as the adults, not quite as smoothly carried off.

"Will you be sleeping in my bed, m'lord?" he asked. "Ma says we got to sleep on the porch."

"Well, whatever your Ma says, goes," said Miles. "Ah . . . do you like sleeping on the porch?"

"Naw. Last time, Zed kicked me and I rolled off in the dark."

"Oh. Well, perhaps, if we're to displace you, you would care to sleep in our tent by way of trade?"

The boy's eyes widened. "Really?"

"Certainly. Why not?"

"Wait'll I tell Zed!" He danced down the steps and shot away around the side of the house. "Zed, hey, Zed . . . !"

"I suppose," said Dea, "we can fumigate it, later. . . . "

Miles's lips twitched. "They're no grubbier than you were at the same age, surely. Or than I was. When I was permitted." The late afternoon was warm. Miles took off his green tunic and hung it on the back of his chair, and unbuttoned the round collar of his cream shirt.

Dea's brows rose. "Are we keeping shopman's hours, then, m'lord, on this investigation? Calling it quits for the day?"

"Not exactly." Miles sipped tea thoughtfully, gazing out across the yard. The trees and treetops fell away down to the bottom of this feeder valley. Mixed scrub climbed the other side of the slope. A crested fold, then the long flanks of a backbone mountain, beyond, rose high and harsh to a summit still flecked with dwindling dirty patches of snow.

"There's still a murderer loose out there somewhere," Dea pointed out helpfully.

"You sound like Pym." Pym, Miles noted, had finished with their horses and was taking his scanner for another walk. "I'm waiting."

"What for?"

"Not sure. The piece of information that will make sense of all this. Look, there's only two possibilities. Csurik's either innocent or he's guilty. If he's guilty, he's not going to turn himself in. He'll certainly involve his relations, hiding and helping him. I can call in reinforcements by comm link from Imperial Civil Security in Hassadar, if I want to. Any time. Twenty men, plus equipment, here by aircar in a couple of hours. Create a circus. Brutal, ugly,

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disruptive, exciting—could be quite popular. A manhunt, with blood at the end.

"Of course, there's also the possibility that Csurik's innocent, but scared. In which case . . . "

"Yes?"

"In which case, there's still a murderer out there." Miles drank more tea. "I merely note, if you want to catch something, running after it isn't always the best way."

Dea cleared his throat, and drank his tea, too.

"In the meantime, I have another duty to carry out. I'm here to be seen. If your scientific spirit is yearning for something to do to wile away the hours, try keeping count of the number of Vorwatchers that turn up tonight."

Miles's predicted parade began almost immediately. It was mainly women, at first, bearing gifts as to a funeral. In the absence of a comm link system Miles wasn't sure by what telepathy they managed to communicate with each other, but they brought covered dishes of food, flowers, extra bedding, and offers of assistance. They were all introduced to Miles with nervous curtseys, but seldom lingered to chat; apparently a look was all their curiosity desired. Ma Karal was polite, but made it clear that she had the situation well in hand, and set their culinary offerings well back of her own.

Some of the women had children in tow. Most of these were sent to play in the woods in back, but a small party of whispering boys sneaked back around the cabin to peek up over the rim of the porch at Miles. Miles had obligingly remained on the porch with Dea, remarking that it was a better view, without saying for whom. For a few moments Miles pretended not to notice his audience, restraining Pym, with a hand signal, from running them off. *Yes, look well, look your fill,* thought Miles. *What you see is what you're going to get, for the rest of your lives or at any rate mine. Get used to it.* . . . Then he caught Zed Karal's whisper, as self-appointed tour guide to his cohorts—"That big one's the one that's come to kill Lem Csurik!"

"Zed," said Miles.

There was an abrupt frozen silence from under the edge of the porch. Even the animal rustlings stopped.

"Come here," said Miles.

To a muted background of dismayed whispers and nervous giggles, Karal's middle boy slouched warily up on to the porch.

"You three—" Miles's pointing finger caught them in mid-flight, "wait there." Pym added his frown for emphasis, and Zed's friends stood paralyzed, eyes wide, heads lined up at the level of the porch floor as if stuck up on some ancient battlement as a warning to kindred malefactors.

"What did you just say to your friends, Zed?" asked Miles quietly. "Repeat it."

Zed licked his lips. "I jus' said you'd come to kill Lem Csurik, lord." Zed was clearly now wondering if Miles's murderous intent included obnoxious and disrespectful boys as well.

"That is not true, Zed. That is a dangerous lie."

Zed looked bewildered. "But Da —said it."

"What is true, is that I've come to

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catch the person who killed Lem Csurik's baby daughter. That may be Lem. But it may not. Do you understand the difference?"

"But Harra said Lem did it, and she ought to know, he's her husband and all."

"The baby's neck was broken by someone. Harra thinks Lem, but she didn't see it happen. What you and your friends here have to understand is that I won't make a mistake. I *can't* condemn the wrong person. My own truth drugs won't let me. Lem Csurik has only to come here and tell me the truth to clear himself, if he didn't do it.

"But suppose he did. What should I do with a man who would kill a baby, Zed?"

Zed shuffled. "Well, she was only a mutie . . . " then shut his mouth and reddened, not looking at Miles.

It was, perhaps, a bit much to ask a twelve-year-old boy to take an interest in any baby, let alone a mutie one . . . *no*, dammit. It wasn't too much. But how to get a hook into that prickly defensive surface? And if Miles couldn't even convince one surly twelve year old, how was he to magically transmute a whole District of adults? A rush of despair made him suddenly want to rage. These people were so bloody *impossible*. He checked his temper firmly.

"Your Da was a twenty-year man, Zed. Are you proud that he served the Emperor?"

"Yes, lord." Zed's eyes sought escape, trapped by these terrible adults.

Miles forged on. "Well, these practices—mutie-killing—shame the Emperor, when he stands for Barrayar before the galaxy. I've been out there. I know. They call us all savages, for the crimes of a few. It shames the Count my father before his peers, and Silvy Vale before the District. A soldier gets honor by killing an armed enemy, not a baby. This matter touches my honor as a Vorkosigan, Zed. Besides," Miles's lips drew back on a mirthless grin, and he leaned forward intently in his chair—Zed recoiled as much as he dared—"you will all be astonished at what *only a mutie* can do. *That* I have sworn on my grandfather's grave."

Zed looked more suppressed than enlightened, his slouch now almost a crouch. Miles slumped back in his chair and released him with a weary wave of his hand. "Go play, boy."

Zed needed no urging. He and his companions shot away around the house as though released from springs.

Miles drummed his fingers on the chair arm, frowning into the silence that neither Pym nor Dea dared break.

"These hill-folk are ignorant, lord," offered Pym after a moment.

"These hill-folk are *mine*, Pym. Their ignorance is . . . a shame upon my house." Miles brooded. How had this whole mess become his anyway? He hadn't created it. Historically, he'd only just got here himself. "Their continued ignorance, anyway," he amended in fairness. It still made a burden like a mountain. "Is the message so complex? So difficult? 'You don't have to kill your children anymore.' It's not like we're asking them all to learn—5-Space navigational math." That had been the plague of Miles's last Academy semester.

"It's not easy for them," shrugged Dea. "It's easy for the central author-

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ities to make the rules, but these people have to live every minute of the consequences. They have so little, and the new rules force them to give their margin to marginal people who can't pay back. The old ways were wise, in the old days. Even now you have to wonder how many premature reforms we can afford, trying to ape the galactics."

And what's your definition of a marginal person, Dea? "But the margin is growing," Miles said aloud. "Places like this aren't up against famine every winter any more. They're not isolated in their disasters, relief can get from one district to another under the Imperial seal . . . we're all getting more connected, just as fast as we can. Besides," Miles paused, and added rather weakly, "perhaps you underestimate them."

Dea's brows rose ironically. Pym strolled the length of the porch, running his scanner in yet another pass over the surrounding scrubland. Miles, turning in his chair to pursue his cooling teacup, caught a slight movement, a flash of eyes, behind the casement-hung front window swung open to the summer air—Ma Karal, standing frozen, listening. For how long? Since he'd called her boy Zed, Miles guessed, arresting her attention. She raised her chin as his eyes met hers, sniffed, and shook out the cloth she'd been holding with a snap. They exchanged a nod. She turned back to her work before Dea, watching Pym, noticed her.

Karal and Alex returned, understandably, around suppertime.

"I have six men out searching," Karal reported cautiously to Miles on the porch, now well on its way to becoming Miles's official HQ. Clearly, Karal had covered ground since midafternoon. His face was sweaty, lined with physical as well as the underlying emotional strain. "But I think Lem's gone into the scrub. It could take days to smoke him out. There's hundreds of places to lie low out there."

Karal ought to know. "You don't think he's gone to some relative's?" asked Miles. "Surely, if he intends to evade us for long, he has to take a chance on resupply, on information. Will they turn him in when he surfaces?"

"It's hard to say." Karal turned his hand palm-out. "It's . . . a hard problem for 'em, m'lord."

"Hm."

How long would Lem Csurik hang around out there in the scrub, anyway? His whole life—his blown-to-bits life—was all here in Silvy Vale. Miles considered the contrast. A few weeks ago, Csurik had been a young man with everything going for him; a home, a wife, a family on the way, happiness; by Silvy Vale standards, comfort and security. His cabin, Miles had not failed to note, though simple, had been kept with love and energy, and so redeemed from the potential squalor of its poverty. Grimmer in the winter, to be sure. Now Csurik was a hunted fugitive, all the little he had torn away in the twinkling of an eye. With nothing to hold him, would he run away and keep running? With nothing to run to, would he linger near the ruins of his life?

The police force available to Miles, a few hours away in Hassadar, was an itch in his mind. Was it not time to call them in, before he fumbled this into a

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worse mess? But . . . if he were meant to solve this by a show of force, why hadn't the Count let him come by aircar on the first day? Miles regretted that two-and-a-half-day ride. It had sapped his forward momentum, slowed him down to Silvey Vale's walking pace, tangled him with time to doubt. Had the Count foreseen it? What did he know that Miles didn't? What *could* he know? Dammit, this test didn't need to be made harder by artificial stumbling blocks, it was bad enough all on its own. *He wants me to be clever,* Miles thought morosely. *Worse, he wants me to be seen to be clever, by everyone here.* He prayed he was not about to be spectacularly stupid, instead.

"Very well, Speaker Karal. You've done all you can for today. Knock off for the night. Call your men off, too. You're not likely to find anything in the dark."

Pym held up his scanner, clearly about to volunteer its use, but Miles waved him down. Pym's brows rose, editorially. Miles shook his head slightly.

Karal needed no further urging. He dispatched Alex to call off the night search with torches. He remained wary of Miles. Perhaps Miles puzzled him as much as he puzzled Miles? Dourly, Miles hoped so.

Miles was not sure at what point the long summer evening segued into a party. After supper the men began to drift in, Karal's cronies, Silvy Vale's elders. Some were apparently regulars who shared the evening government news broadcasts on Karal's audio set. Too many names, and Miles daren't forget a one. A group of amateur musicians arrived with their homemade mountain instruments, rather breathless, obviously the band tapped for all the major weddings and wakes in Silvy Vale; this all seemed more like a funeral to Miles every minute.

The musicians stood in the middle of the yard and played. Miles's porch-HQ now became his aristocratic box seat. It was hard to get involved with the music when the audience was all so intently watching him. Some songs were serious, some—rather carefully at *first—funny. Miles's spontaneity* was frequently frozen in mid-laugh by a faint sigh of relief from those around him; his stiffening froze them in turn, self-stymied like two people trying to dodge each other in a corridor.

But one song was so hauntingly beautiful—a lament for lost love—that Miles was struck to the heart. *Elena* . . . In that moment, old pain transformed to melancholy, sweet and distant; a sort of healing, or at least the realization that a healing had taken place, unwatched. He almost had the singers stop there, while they were perfect, but feared they might think him displeased. But he remained quiet and inward for a time afterward, scarcely hearing their next offering in the gathering twilight.

At least the piles of food that had arrived all afternoon were thus accounted for. Miles had been afraid Ma Karal and her cronies had expected him to get around that culinary mountain all by himself.

At one point Miles leaned on the rail and glanced down the yard to see Fat Ninny at tether, making more friends. A whole flock of pubescent girls were clustered around him, petting him, brushing his fetlocks, braiding flowers

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and ribbons in his mane and tail, feeding him tidbits, or just resting their cheeks against his warm silky side. Ninny's eyes were half-closed in smug content.

God, thought Miles jealously, *if I had half the sex-appeal of that bloody horse I'd have more girlfriends than my cousin Ivan.* Miles considered, very briefly, the pros and cons of making a play for some unattached female. The striding lords of old and all that . . . no. There were some kinds of stupid he didn't have to be, and that was definitely one of them. The service he had already sworn to one small lady of Silvy Vale was surely all he could bear without breaking; he could feel the strain of it all around him now, like a dangerous pressure in his bones.

He turned to find Speaker Karal presenting a woman to him, far from pubescent; she was perhaps fifty, lean and little, work-worn. She was carefully clothed in an aging best-dress, her greying hair combed back and bound at the nape of her neck. She bit at her lips and cheeks in quick tense motions, half-suppressed in her self-consciousness.

" 'S Ma Csurik, m'lord. Lem's mother." Speaker Karal ducked his head and backed away, abandoning Miles without aid or mercy—*Come back, you coward!*

"Ma'am," Miles said. His throat was dry. Karal had set him up, dammit, a public play—no, the other guests were retreating out of earshot, too, most of them.

"M'lord," said Ma Csurik. She managed a nervous curtsey.

"Uh . . . do sit down." With a ruthless jerk of his chin Miles evicted Dr. Dea from his chair and motioned the hill woman into it. He turned his own chair to face hers. Pym stood behind them, silent as a statue, tight as a wire. Did he imagine the old woman was about to whip a needler-pistol from her skirts? No—it was Pym's job to imagine things like that for Miles, so that Miles might free his whole mind for the problem at hand. Pym was almost as much an object of study as Miles himself. Wisely, he'd been holding himself apart, and would doubtless continue to do so till the dirty work was over.

"M'lord," said Ma Csurik again, and stumbled again to silence. Miles could only wait. He prayed she wasn't about to come unglued and weep on his knees or some damn thing. This was excruciating. *Stay strong, woman,* he urged silently.

"Lem, he . . . " she swallowed, "I'm sure he didn't kill the babe. There's never been any of that in our family, I swear it! He says he didn't, and I believe him."

"Good," said Miles affably. "Let him come say the same thing to me under fast-penta, and I'll believe him, too."

"Come away, Ma," urged a lean young man who had accompanied her and now stood waiting by the steps, as if ready to bolt into the dark at a motion. "It's no good, can't you see?" He glowered at Miles.

She shot the boy a quelling frown—another of her five sons?—and turned back more urgently to Miles, groping for words. "My Lem. He's only twenty, lord."

"*I'm* only twenty, Ma Csurik," Miles felt compelled to point out. There was another brief impasse.

"Look, I'll say it again," Miles burst

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out impatiently. "And again, and again, till the message penetrates all the way back to its intended recipient. I *cannot* condemn an innocent person. My truth drugs won't let me. Lem can clear himself. He has only to come in. Tell him, will you? Please?"

She went stony, guarded. "I . . . haven't seen him, m'lord."

"But you might."

She tossed her head. "So? I might not." Her eyes shifted to Pym and away, as if the sight of him burned. The silver Vorkosigan emblems embroidered on Pym's collar gleamed in the twilight like animal eyes, moving only with his breathing. Karal was now bringing lighted lamps onto the porch, but keeping his distance still.

"Ma'am," said Miles tightly. "The Count my father has ordered me to investigate the murder of your granddaughter. If your son means so much to you, how can his child mean so little? Was she . . . your first grandchild?"

Her face was sere. "No, lord. Lem's older sister, she has two. *They're* all right," she added with emphasis.

Miles sighed. "If you truly believe your son is innocent of this crime, you must help me prove it. Or—do you doubt?"

She shifted uneasily. There was doubt in her eyes—she didn't know, blast it. Fast-penta would be useless on her, for sure. As Miles's magic wonder drug, much counted-upon, fast-penta seemed to be having wonderfully little utility in this case so far.

"Come away, Ma," the young man urged again. "It's no good. The mutie lord came up here for a killing. They have to have one. It's a show."

Damn straight, thought Miles acidly. He was a perceptive young lunk, that one.

Ma Csurik let herself be persuaded away by her angry and embarrassed son plucking at her arm. She paused on the steps, though, and shot bitterly over her shoulder, "It's *all* so easy for you, isn't it?"

My head hurts, thought Miles.

There was worse to come before the evening ended.

The new woman's voice was grating, low and angry. "Don't you talk down to me, Serg Karal. I got a right for one good look at this mutie lord."

She was tall and stringy and tough. *Like her daughter,* Miles thought. She had made no attempt to freshen up. A faint reek of summer sweat hung about her working dress. And how far had she walked? Her grey hair hung in a switch down her back, a few strands escaping the tie. If Ma Csurik's bitterness had been a stabbing pain behind the eyes, this one's rage was a wringing knot in the gut.

She shook off Karal's attempted restraint and stalked up to Miles in the lamplight. "So."

"Uh . . . this is Ma Mattulich, m'lord," Karal introduced her. "Harra's mother."

Miles rose to his feet, managed a short formal nod. "How do you do, madam?" He was very conscious of being a head shorter than her. She had once been of a height with Harra, Miles estimated, but her aging bones were beginning to pull her down.

She merely stared. She was a gum-leaf chewer, by the faint blackish stains around her mouth. Her jaw worked now

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on some small bit, tiny chomps, grinding too hard. She studied him openly, without subterfuge or the least hint of apology, taking in his head, his neck, his back, his short and crooked legs. Miles had the unpleasant illusion that she saw right through to all the healed cracks in his brittle bones as well. Miles's chin jerked up twice in the twitchy, nervous-involuntary tic that he was sure made him look spastic, before he controlled it with an effort.

"All right," said Karal roughly, "you've seen. Now come away, for God's sake, Mara." His hand opened in apology to Miles. "Mara, she's been pretty distraught over all this, m'lord. Forgive her."

"Your only grandchild," said Miles to her, in an effort to be kind, though her peculiar anguish repelled kindness with a scraped and bleeding scorn. "I understand your distress, ma'am. But there will be justice for little Raina. That I have sworn."

"How can there be justice *now?*" she raged, thick and low. "It's too late—a world too late—for justice, mutie lordling. What use do I have for your damned justice *now?*"

"Enough, Mara!" Karal insisted. His brows drew down and his lips thinned, and he forced her away and escorted her firmly off his porch.

The last lingering remnant of visitors parted for her with an air of respectful mercy, except for two lean teenagers hanging on the fringes who drew away as if avoiding poison. Miles was forced to revise his mental image of the Brothers Csurik. If those two were another sample, there was no team of huge menacing hill hulks after all. They were a team of little skinny menacing hill squirts, instead. Not really an improvement, they looked like they could move as fast as striking ferrets if they had to. Miles's lips curled in frustration.

The evening's entertainments ended finally, thank God, close to midnight. Karal's last cronies marched off into the woods by lantern light. The repaired and repowered audio set was carried off by its owner with many thanks to Karal. Fortunately, it had been a mature and sober crowd, even somber, no drunken brawls or anything. Pym got the Karal boys settled in the tent, took a last patrol around the cabin, and joined Miles and Dea in the loft. The pallets' stuffing had been spiked with fresh scented native herbs, to which Miles hoped devoutly he was not allergic. Ma Karal had wanted to turn her own bedroom over to Miles's exclusive lordly use, exiling herself and her husband to the porch, too, but fortunately Pym had been able to persuade her that putting Miles in the loft, flanked by Dea and himself, was to be preferred from a security standpoint.

Dea and Pym were soon snoring, but sleep eluded Miles. He tossed on his pallet as he turned his ploys of the day, such as they had been, over and over in his mind. Was he being too slow, too careful, too conservative? This wasn't exactly good assault tactics, suprise with a superior force. The view he'd gained of the terrain from Karal's porch tonight had been ambiguous at best.

On the other hand, it did no good to charge off across a swamp, as his fellow cadet and cousin Ivan Vorpatril had demonstrated so memorably once on

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summer maneuvers. It had taken a heavy hovercab, with a crane, to crank the six big, strong, healthy, fully field-equipped young men of Ivan's patrol out of the chest-high, gooey black mud. Ivan had got his revenge simultaneously, though, when the cadet "sniper" they had been attacking fell out of his tree and broke his arm while laughing hysterically as they sank slowly and beautifully into the ooze. Ooze that a little guy, with his laser rifle wrapped in his loincloth, could swim across like a frog. The war games umpire had ruled it a draw. Miles rubbed his forearm and grinned in memory, and faded out at last.

Miles awoke abruptly and without transition deep in the night with a sense of something wrong. A faint orange glow shimmered in the blue darkness of the loft. Quietly, so as not to disturb his sleeping companions, he rose on his pallet and peered over the edge into the main room. The glow was coming through the front window.

Miles swung onto the ladder and padded downstairs for a look out doors. "Pym," he called softly.

Pym shot awake with a snort. "M'lord?" he said, alarmed.

"Come down here. Quietly. Bring your stunner."

Pym was by his side in seconds. He slept in his trousers with his stunner holster and boots by his pillow. "What the hell—?" Pym muttered, looking out, too.

The glow was from fire. A pitchy torch, flung to the top of Miles's tent set up in the yard, was burning quietly. Pym lurched toward the door, then controlled his movements as the same realization came to him as had to Miles. Theirs was a Service-issue tent, and its combat-rated synthetic fabric would neither melt nor burn.

Miles wondered if the person who'd heaved the torch had known that. Was this some arcane warning, or a singularly inept attack? If the tent had been ordinary fabric, and Miles in it, the intended result might not have been trivial. Worse with Karal's boys in it—a bursting blossom of flame—Miles shuddered.

Pym loosened the stunner in his holster and stood poised by the front door. "How long?"

"I'm not sure. Could have been burning like that for ten minutes before it woke me."

Pym shook his head, took a slight breath, raised his scanner, and vaulted into the fire-gilded darkness.

"Trouble, m'lord?" Speaker Karal's anxious voice came from his bedroom door.

"Maybe. Wait—" Miles halted him as he plunged for the door. "Pym's running a patrol with a scanner and a stunner. Wait'll he calls the all-clear, I think. Your boys may be safer inside the tent."

Karal came up to the window, caught his breath, and swore.

Pym returned in a few minutes. "There's no one within a kilometer, now," he reported shortly. He helped Karal take the goat bucket and douse the torch. The boys, who had slept through the fire, woke at its quenching.

"I think maybe it was a bad idea to lend them my tent," said Miles from the porch in a choked voice. "I am pro-

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foundly sorry, Speaker Karal. I didn't think."

"This should never . . . " Karal was spluttering with anger and delayed fright, "this should *never* have happened, m'lord. I apologize for . . . for Silvy Vale." He turned helplessly, peering into the darkness. The night sky, star-flecked, lovely, was threatening now.

The boys, once the facts penetrated their sleepiness, thought it was all just great, and wanted to return to the tent and lie in wait for the next assassin. Ma Karal, shrill and firm, herded them indoors instead and made them bed down in the main room. It was an hour before they stopped complaining at the injustice of it and went back to sleep.

Miles, keyed up nearly to the point of gibbering, did not sleep at all. He lay stiffly on his pallet, listening to Dea, who slept breathing heavily, and Pym, feigning sleep for courtesy and scarcely seeming to breathe at all.

Miles was about to suggest to Pym that they give up and go out on the porch for the rest of the night when the silence was shattered by a shrill squeal, enormously loud, pain-edged, from outside.

"The horses!" Miles spasmed to his feet, heart racing, and beat Pym to the ladder. Pym cut ahead of him by dropping straight over the side of the loft into an elastic crouch, and beat him to the door. There, Pym's trained bodyguard's reflexes compelled him to try and thrust Miles back inside. Miles almost bit him. "Go, dammit! I've got a weapon!"

Pym, good intentions frustrated, swung out the cabin door with Miles on his heels. Halfway down the yard they split to each side as a massive snorting shape loomed out of the darkness and nearly ran them down; the sorrel mare, loose again. Another squeal pierced the night from the lines where the horses were tethered.

"Ninny?" Miles called, panicked. It was Ninny's voice making those noises, the like of which Miles had not heard since the night a shed had burned down at Vorkosigan Surleau with a horse trapped inside. "Ninny!"

Another grunting squeal, and a thunk like someone splitting a watermelon with a mallet. Pym staggered back, inhaling with difficulty, a resonant deep stutter, and tripped to the ground where he lay curled up around himself. Not killed outright, apparently, because between gasps he was managing to swear lividly. Miles dropped to the ground beside him, checked his skull—no, thank God it had been Pym's chest Ninny's hoof had hit with that alarming sound. The bodyguard only had the wind knocked out of him, maybe a cracked rib. Miles more sensibly ran around to the *front* of the horse lines. "Ninny!"

Fat Ninny was jerking his head against his rope, attempting to rear. He squealed again, his white-rimmed eyes gleaming in the darkness. Miles ran to his head. "Ninny, boy! What is it?" His left hand slid up the rope to Ninny's halter, his right stretched to stroke Ninny's shoulder soothingly. Fat Ninny flinched, but stopped trying to rear, and stood trembling. The horse shook his head. Miles's face and chest were suddenly spattered with something hot and dark and sticky.

"Dea!" Miles yelled. "*Dea!*"

Nobody slept through this uproar. Six people tumbled off the porch and down

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the yard, and not one of them thought to bring a light . . . no, the brilliant flare of a cold light sprang from between Dr. Dea's fingers, and Ma Karal was struggling even now to light a lantern. "Dea, get that damn light over here!" Miles demanded, and stopped to choke his voice back down an octave to its usual carefully-cultivated deeper register.

Dea galloped up and thrust the light toward Miles, then gasped, his face draining. "My lord! Are you shot?" In the flare the dark liquid soaking Miles's shirt glowed suddenly scarlet.

"Not me," Miles said, looking down at his chest in horror himself. A flash of memory turned his stomach over, cold at the vision of another blood-soaked death, that of the late Sergeant Bothari whom Pym had replaced. Would never replace.

Dea spun. "Pym?"

"He's all right," said Miles. A long inhaling wheeze rose from the grass a few meters off, the exhalation punctuated with obscenities. "But he got kicked by the horse. Get your medkit!" Miles peeled Dea's fingers off the cold light, and Dea dashed back to the cabin.

Miles held the light up to Ninny, and swore in a sick whisper. A huge cut, a third of a meter long and of unknown depth, scored Ninny's glossy neck. Blood soaked his coat and runneled down his foreleg. Miles's fingers touched the wound fearfully; his hands spread on either side, trying to push it closed, but the horse's skin was elastic and it pulled apart and bled profusely as Fat Ninny shook his head in pain. Miles grabbed the horse's nose—"Hold still, boy!" Somebody had been going for Ninny's jugular. And had almost made it; Ninny—tame, petted, friendly, trusting Ninny—would not have moved from the touch until the knife bit deep.

Karal was helping Pym to his feet as Dr. Dea returned. Miles waited while Dea checked Pym over, then called, "Here, Dea!"

Zed, looking quite as horrified as Miles, helped to hold Ninny's head as Dea inspected the cut. "I took tests," Dea complained *sotto voce* as he worked. "I beat out twenty-six other applicants, for the honor of becoming the prime minister's personal physician. I have practiced the procedures of seventy separate possible medical emergencies, from coronary thrombosis to attempted assassination. Nobody — *nobody*—told me my duties would include sewing up a damned horse's neck in the middle of the night in the middle of a howling wilderness. . . . " but he kept working as he complained, so Miles didn't quash him, but kept gently petting Ninny's nose, and hypnotically rubbing the hidden pattern of his muscles, to soothe and still him. At last Ninny relaxed enough to rest his slobbery chin on Miles's shoulder.

"Do horses get anesthetics?" asked Dea plaintively, holding his medical stunner as if not sure just what to do with it.

"This one does," said Miles stoutly. "You treat him just like a person, Dea. This is the last animal that the Count my Grandfather personally trained. He named him. I watched him get born. We trained him together. Grandfather had me pick him up and hold him every day for a week after he was foaled, till he got too big. Horses are creatures of

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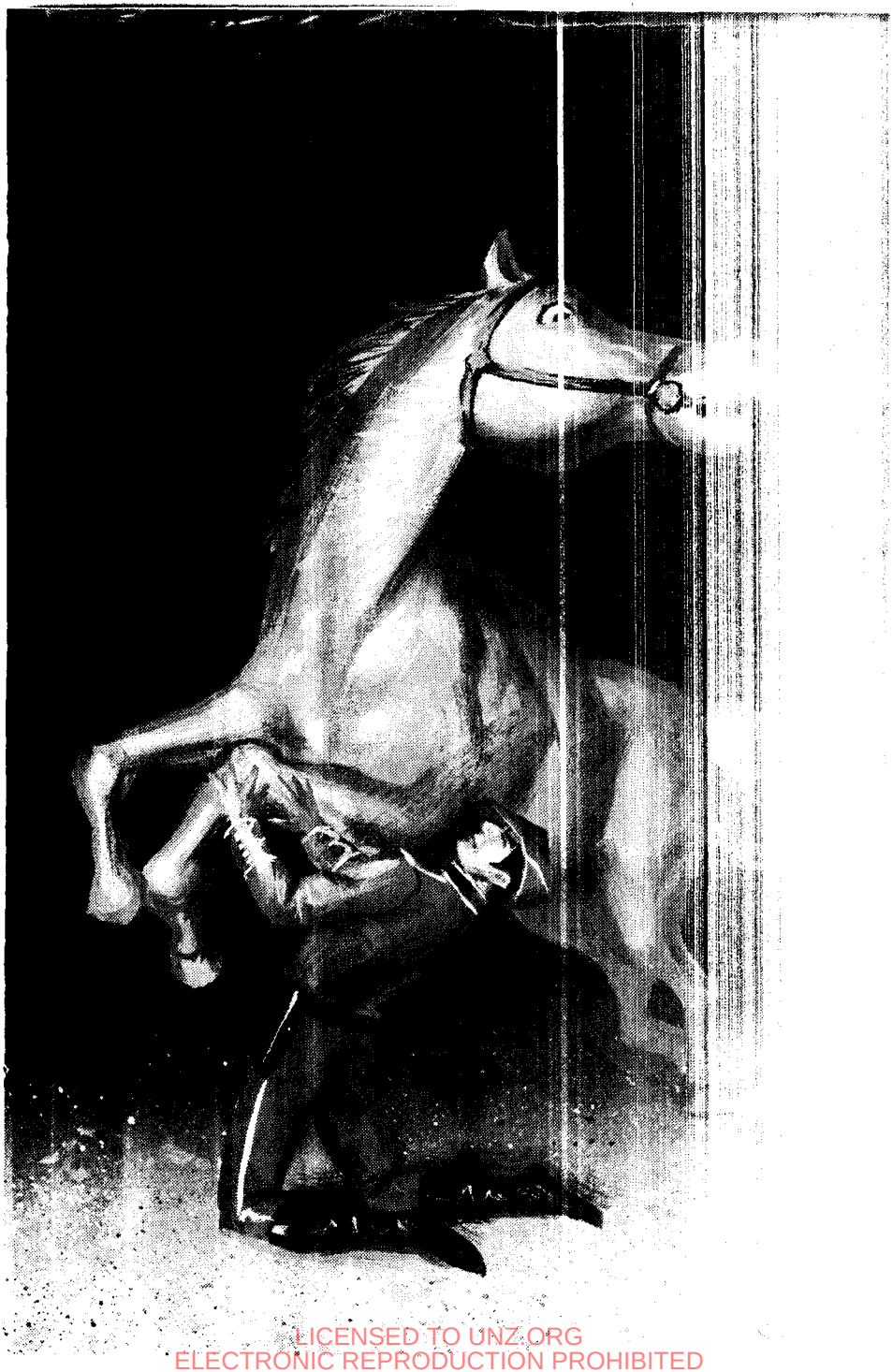

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habit, grandfather said, and take first impressions to heart. Forever after Ninny thought I was bigger than he was."

Dea sighed and made busy with anesthetic stun, cleansing solution, antibiotics, muscle relaxants, and biotic glue. With a surgeon's touch he shaved the edges of the cut and placed the reinforcing net. Zed held the light anxiously.

"The cut is clean," said Dea, "but it will undergo a lot of flexing—I don't suppose it can very well be immobilized, in this position? No, hardly. This should do. If he were a human, I'd tell him to rest at this point."

"He'll be rested," Miles promised firmly. "Will he be all right now?"

"I suppose so. How the devil should I know?" Dea looked highly aggrieved, but his hand sneaked out to recheck his repairs.

"General Piotr," Miles assured him, "would have been very pleased with your work." Miles could hear him in his head now, snorting, *Damned technocrats. Nothing but horse doctors with a more expensive set of toys.* Grandfather would have loved being proved right. "You, ah . . . never met my grandfather, did you?"

"Before my time, my lord," said Dea. "I've studied his life and campaigns, of course."

"Of course."

Pym had a hand-light now, and was limping with Karal in a slow spiral around the horse lines, inspecting the ground. Karal's eldest boy had recaptured the sorrel mare and brought her back and retethered her. Her tether had been torn loose, not cut; had the mysterious attacker's choice of equine victim been random, or calculated? How calculated? Was Ninny attacked as a mere symbol of his master, or had the person known how passionately Miles loved the animal? Was this vandalism, a political statement, or an act of precisely-directed, subtle cruelty?

What have I ever done to you?! Miles's thought howled silently to the surrounding darkness.

"They got away, whoever it was," Pym reported. "Out of scanner range before I could breathe again. My apologies, m'lord. They don't seem to have dropped anything on the ground."

There had to have been a knife, at least. A knife, its haft gory with horse blood in a pattern of perfect fingerprints, would have been extremely convenient just now. Miles sighed.

Ma Karal drifted up and eyed Dea's medkit, as he cleaned and repacked it. "All that," she muttered under her breath, "for a horse. . . . "

Miles refrained, barely, from leaping to a hot defense of the value of this particular horse. How many people in Silvy Vale had Ma Karal seen suffer and die, in her lifetime, for lack of no more medical technology than what Dea was carrying under his arm just now?

Guarding his horse, Miles watched from the porch as dawn crept over the landscape. He had changed his shirt and washed off. Pym was inside getting his ribs taped. Miles sat with his back to the wall and a stunner on his lap as the night mists slowly grew grey. The valley was a grey blur, fog-shrouded, the hills darker rolls of fog beyond. Directly overhead, grey thinned to a paling blue.

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The day would be fine and hot once the fog burned away.

It was surely time now to call out the troops from Hassadar. This was getting just too weird. His bodyguard was half out of commission—true, it was Miles's horse that had rendered him so, not the mystery attacker. But just because the attacks hadn't been fatal didn't mean they hadn't been intended so. Perhaps a third attack would be brought off more expertly. Practice makes perfect.

Miles felt unstrung with nervous exhaustion. How had he let a mere horse become such a handle on his emotions? Bad, that, almost unbalanced—yet Ninny's was surely one of the truly innocent pure souls Miles had ever known. Miles remembered the other innocent in the case then, and shivered in the damp. *It was cruel, lord, something cruel.* . . . Pym was right, the bushes could be crawling with Csurik assassins right now.

Dammit, the bushes *were* crawling —over there, a movement, a damping wave of branch lashing in recoil from—what? Miles's heart lurched in his chest. He adjusted his stunner to full power, slipped silently off the porch, and began his stalk, crouching low, taking advantage of cover wherever the long grasses of the yard had not been trampled flat by the activities of the last day, and night. Miles froze like a predatory cat as a shape seemed to coalesce out of the mist.

A lean young man, not too tall, dressed in the baggy trousers that seemed to be standard here, stood wearily by the horse lines, staring up the yard at Karal's cabin. He stood so for a full two minutes without moving. Miles held a bead on him with his stunner. If he dared make one move toward Ninny . . .

The young man walked back and forth uncertainly, then crouched on his heels, still gazing up the yard. He pulled something from the pocket of his loose jacket—Miles's finger tightened on the trigger—but he only put it to his mouth and bit. An apple. The crunch carried clearly in the damp air, and the faint perfume of its juices. He ate about half, then stopped, seeming to have trouble swallowing. Miles checked the knife at his belt, made sure it was loose in its sheath. Ninny's nostrils widened, and he nickered hopefully, drawing the young man's attention. He rose and walked over to the horse.

The blood pulsed in Miles's ears, louder than any other sound. His grip on the stunner was damp and white-knuckled. The young man fed Ninny his apple. The horse chomped it down, big jaw rippling under his skin, then cocked his hip, dangled one hind hoof, and sighed hugely. If he hadn't seen the man eat off the fruit first Miles might have shot him on the spot. It couldn't be poisoned. . . . The man made to pet Ninny's neck, then his hand drew back in startlement as he encountered Dea's dressing. Ninny shook his head uneasily. Miles rose slowly and stood waiting. The man scratched Ninny's ears instead, looked up one last time at the cabin, took a deep breath, stepped forward, saw Miles, and stood stock still.

"Lem Csurik?" said Miles.

A pause, a frozen nod. "Lord Vorkosigan?" said the young man. Miles nodded in turn.

Csurik swallowed. "Vor lord," he quavered, "do you keep your word?"

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What a bizarre opening. Miles's brows climbed. Hell, go with it. "Yes. Are you coming in?"

"Yes and no, m'lord."

"Which?"

"A bargain, lord. I must have a bargain, and your word on it."

"If you killed Raina—"

"No, lord. I swear it. I didn't."

"Then you have nothing to fear from me."

Lem Csurik's lips thinned. What the devil could this hill man find ironic? How dare he find irony in Miles's confusion? Irony, but no amusement.

"Oh, lord," breathed Csurik, "I wish that were so. But I have to prove it to Harra. Harra must believe me—you have to make her believe me, lord!"

"You have to make me believe you first. Fortunately, that isn't hard. You come up to the cabin and make that same statement under fast-penta, and I will rule you cleared."

Csurik was shaking his head.

"Why not?" said Miles patiently. That Csurik had turned up at all was strong circumstantial indication of his innocence. Unless he somehow imagined he could beat the drug. Miles would be patient for, oh, three or four seconds at least. Then, by God, he'd stun him, drag him inside, tie him up till he came round, and get to the bottom of this before breakfast.

"The drug—they say you can't hold anything back."

"It would be pretty useless if you could."

Csurik stood silent a moment.

"Are you trying to conceal some lesser crime on your conscience? Is that the bargain you wish to strike? An amnesty? It . . . might be possible. If it's short of another murder, that is."

"No, lord. I've never killed anybody!"

"Then maybe we can deal. Because if you're innocent, I need to know as soon as possible. Because it means my work isn't finished here."

"That's . . . that's the trouble, m'lord." Csurik shuffled, then seemed to come to some internal decision and stood sturdily. "I'll come in and risk your drug. And I'll answer anything about me you want to ask. But you have to promise—swear!—you won't ask me about . . . about anything else. Anybody else."

"Do you know who killed your daughter?"

"Not for sure." Csurik threw his head back defiantly. "I didn't see it. I have guesses."

"I have guesses, too."

"That's as may be, lord. Just so's they don't come from my mouth. That's all I ask."

Miles holstered his stunner, and rubbed his chin. "Hm." A very slight smile turned one corner of his lip. "I admit, it would be more—elegant—to solve this case by reason and deduction than brute force. Even so tender a force as fast-penta."

Csurik's head lowered. "I don't know elegant, lord. But I don't want it to be from my mouth."

Decision bubbled up in Miles, straightening his spine. Yes. He *knew*, now. He had only to run through the proofs, step by chained step. Just like 5-Space math. "Very well. I swear by my word as Vorkosigan, I shall confine my questions to the facts to which you

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were an eyewitness. I will not ask you for conjectures about persons or events for which you were not present. There, will that do?''

Csurik bit his lip. ''Yes, lord. If you keep your word.''

''Try me,'' suggested Miles. His lips wrinkled back on a vulpine smile, absorbing the implied insult without comment.

Csurik climbed the yard beside Miles as if to an executioner's block. Their entrance created a tableau of astonishment among Karal and his family, clustered around their wooden table where Dea was treating Pym. Pym and Dea looked rather blank, till Miles made introductions: ''Dr. Dea, get out your fast-penta. Here's Lem Csurik come to talk with us.''

Miles steered Lem to a chair. The hill man sat with his hands clenched. Pym, a red and purpling bruise showing at the edges of the white tape circling his chest, took up his stunner and stepped back.

Dr. Dea muttered under his breath to Miles as he got out the hypospray. ''How'd you *do* that?''

Miles's hand brushed his pocket. He pulled out a sugar cube and held it up, and grinned through the C of his thumb and finger. Dea snorted, but pursed his lips with reluctant respect.

Lem flinched as the hypospray hissed on his arm, as if he expected it to hurt.

''Count backwards from ten,'' Dea instructed. By the time Lem reached three, he had relaxed; at zero, he giggled.

''Karal, Ma Karal, Pym, gather round,'' said Miles. ''You are my witnesses. Boys, stay back and stay quiet. No interruptions, please.''

Miles ran through the preliminaries, half a dozen questions designed to set up a rhythm and kill time while the fast-penta took full effect. Lem Csurik grinned foolishly, lolling in his chair, and answered them all with sunny good will. Fast-penta interrogation had been part of Miles's military intelligence course at the Service Academy. The drug seemed to be working exactly as advertised, oddly enough.

''Did you return to your cabin that morning, after you spent the night at your parents'?''

''Yes, m'lord,'' Lem smiled.

''About what time?''

''Mid-morning.''

Nobody here had a chrono, that was probably as precise an answer as Miles was likely to get. ''What did you do when you got there?''

''Called for Harra. She was gone, though. It frightened me that she was gone. Thought she might've run out on me.'' Lem hiccoughed. ''I want my Harra.''

''Later. Was the baby asleep?''

''She was. She woke up when I called for Harra. Started crying again. It goes right up your spine.''

''What did you do then?''

Lem's eyes widened. ''I got no milk. She wanted Harra. There's nothing I could do for her.''

''Did you pick her up?''

''No, lord, I let her lay. There was nothing I could do for her. Harra, she'd hardly let me touch her, she was that nervous about her. Told me I'd drop her or something.''

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"You didn't shake her, to stop her screaming?"

"No, lord, I let her lay. I left to look down the path for Harra."

"Then where did you go?"

Lem blinked. "My sister's. I'd promised to help haul wood for a new cabin. Bella—m'other sister—is getting married, y'see, and—"

He was beginning to wander, as was normal for this drug. "Stop," said Miles. Lem fell silent obediently, swaying slightly in his chair. Miles considered his next question carefully. He was approaching the fine line, here. "Did you meet anyone on the path? Answer yes or no."

"Yes."

Dea was getting excited. "*Who? Ask him who!*"

Miles held up his hand. "You can administer the antagonist now, Dr. Dea."

"Aren't you going to ask him? It could be vital!"

"I can't. I gave my word. Administer the antagonist now, Doctor!"

Fortunately, the confusion of two interrogators stopped Lem's mumbled willing reply to Dea's question. Dea, bewildered, pressed his hypospray against Lem's arm. Lem's eyes, half-closed, snapped open within seconds. He sat up straight and rubbed his arm, and his face.

"Who did you meet on the path?" Dea asked him directly.

Lem's lips pressed tight; he looked for rescue to Miles.

Dea looked, too. "Why won't you ask him?"

"Because I don't need to," said Miles. "I know precisely who Lem met on the path, and why he went on and not back. It was Raina's murderer. As I shall shortly prove. And—witness this, Karal, Ma Karal—that information did not come from Lem's mouth. Confirm!"

Karal nodded slowly. "I . . . see, m'lord. That was . . . very good of you."

Miles gave him a direct stare, his mouth set in a tight smile. "And when is a mystery no mystery at all?"

Karal reddened, not replying for a moment. Then he said, "You may as well keep on like you're going, m'lord. There's no stopping you now, I suppose."

"No."

Miles sent runners to collect the witnesses, Ma Karal in one direction, Zed in a second, Speaker Karal and his eldest in a third. He had Lem wait with Pym, Dea, and himself. Having the shortest distance to cover, Ma Karal arrived back first, with Ma Csurik and two of her sons in tow.

His mother fell on Lem, embracing him and then looking fearfully over her shoulder at Miles. The younger brothers hung back, but Pym had already moved between them and the door.

"It's all right, Ma," Lem patted her on the back. "Or . . . anyway, I'm all right. I'm clear. Lord Vorkosigan believes me."

She glowered at Miles, still holding Lem's arm. "You didn't let the mutie lord give you that poison drug, did you?"

"Not poison," Miles denied. "In fact, the drug may have saved his life. That damn near makes it a medicine, I'd say. However," he turned toward

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Lem's two younger brothers, and folded his arms sternly, "I would like to know which of you young morons threw the torch on my tent last night?"

The younger one whitened; the elder, hotly indignant, noticed his brother's expression and cut his denial off in mid-syllable. "You didn't!" he hissed in horror.

"Nobody," said the white one. "Nobody did."

Miles raised his eyebrows. There followed a short, choked silence.

"Well, *nobody* can make his apologies to Speaker and Ma Karal, then," said Miles, "since it was their sons who were sleeping in the tent last night. I and my men were in the loft."

The boy's mouth opened in dismay. The youngest Karal stared at the pale Csurik brother, his age-mate, and whispered importantly, "You, Dono! You idiot, didn't ya know that tent wouldn't burn? It's real Imperial Service issue!"

Miles clasped his hands behind his back, and fixed the Csuriks with a cold eye. "Rather more to the point, it was attempted assassination upon your Count's heir, which carries the same capital charge of treason as an attempt upon the Count himself. Or perhaps Dono didn't think of that?"

Dono was thrown into flummoxed confusion. No need for fast-penta here, the kid couldn't carry off a lie worth a damn. Ma Csurik now had hold of Dono's arm, too, without letting go of Lem's; she looked as frantic as a hen with too many chicks, trying to shelter them from storm.

"I wasn't trying to kill you, lord!" cried Dono.

"What were you trying to do, then?"

"You'd come to kill Lem. I wanted to . . . make you go away. Frighten you away. I didn't think anyone would really get hurt—I mean, it was only a tent!"

"You've never seen anything burn down, I take it. Have you, Ma Csurik?"

Lem's mother nodded, lips tight, clearly torn between a desire to protect her son from Miles, and a desire to beat Dono till he bled for his potentially lethal stupidity.

"Well, but for a chance, you could have killed or horribly injured three of your friends. Think on that, please. In the meantime, in view of your youth and ah, apparent mental defectiveness, I shall hold the treason charge. In return, Speaker Karal and your parents shall be responsible for your good behavior in the future, and decide what punishment is appropriate."

Ma Csurik melted with relief and gratitude. Dono looked like he'd rather have been shot. His brother poked him, and whispered, "Mental defective!" Ma Csurik slapped the taunter on the side of his head, suppressing him effectively.

"What about your horse, m'lord?" asked Pym.

"I . . . do not suspect them of the business with the horse," Miles replied slowly. "The attempt to fire the tent was plain stupidity. The other was . . . a different order of calculation altogether."

Zed, who had been permitted to take Pym's horse, returned then with Harra up behind him. Harra entered Speaker Karal's cabin, saw Lem, and stopped with a bitter glare. Lem stood open-handed, his eyes wounded, before her.

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"So, lord," Harra said. "You caught him." Her jaw was clenched in joyless triumph.

"Not exactly," said Miles. "He came here and turned himself in. He's made his statement under fast-penta, and cleared himself. Lem did not kill Raina."

Harra turned from side to side. "But I saw he'd been there! He'd left his jacket, and took his good saw and wood planer away with him. I knew he'd been back while I was out! There must be something wrong with your drug!"

Miles shook his head. "The drug worked fine. Your deduction was correct as far as it went, Lem did visit the cabin while you were out. But when he left, Raina was still alive, crying vigorously. It wasn't Lem."

She swayed. "Who, then?"

"I think you know. I think you've been working very hard to deny that knowledge, hence your excessive focus on Lem. As long as you were sure it was Lem, you didn't have to think about the other possibilities."

"But who else would care?" Harra cried. "Who else would bother?"

"Who, indeed?" sighed Miles. He walked to the front window and glanced down the yard. The fog was clearing in the full light of morning. The horses were moving uneasily. "Dr. Dea, would you please get a second dose of fast-penta ready?" Miles turned, paced back to stand before the fireplace, its coals still banked for the night. The faint heat was pleasant on his back.

Dea was staring around, the hypospray in his hand, clearly wondering to whom to administer it. "My lord?" he queried, brows lowering in demand for explanation.

"Isn't it obvious to you, Doctor?" Miles asked lightly.

"*No,* my lord." His tone was slightly indignant.

"Nor to you, Pym?"

"Not . . . entirely, m'lord." Pym's glance, and stunner aim, wavered uncertainly to Harra.

"I suppose it's because neither of you ever met my grandfather," Miles decided. "He died just about a year before you entered my father's service, Pym. He was born at the very end of the Time of Isolation, and lived through every wrenching change this century has dealt to Barrayar. He was called the last of the Old Vor, but really, he was the first of the new. He changed with the times, from the tactics of horse cavalry to that of flyer squadrons, from swords to atomics, and he changed *successfully.* Our present freedom from the Cetagandan occupation is a measure of how fiercely he could adapt, then throw it all away and adapt again. At the end of his life he was called a conservative, only because so many of Barrayar had streamed past him in the direction he had led, prodded, pushed, and pointed all his life.

"He changed, and adapted, and bent with the wind of the times. Then, in his age—for my father was his youngest and sole surviving son, and did not himself marry till middle age—in his age, he was hit with me. And he had to change again. And he couldn't.

"He begged for my mother to have an abortion, after they knew more or less what the fetal damage would be. He and my parents were estranged for

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five years after I was born. They didn't see each other or speak or communicate. Everyone thought my father moved us to the Imperial Residence when he became regent because he was angling for the throne, but in fact it was because the Count my grandfather denied him the use of Vorkosigan House. Aren't family squabbles jolly fun? Bleeding ulcers run in my family, we give them to each other." Miles strolled back to the window and looked out. Ah, yes. Here it came.

"The reconciliation was gradual, when it became quite clear there would be no other son," Miles went on. "No dramatic denouement. It helped when the medics got me walking. It was essential that I tested out bright. Most important of all, I never let him see me give up."

Nobody had dared interrupt this lordly monologue, but it was clear from several expressions that the point of it was escaping them. Since half the point was to kill time, Miles was not greatly disturbed by their failure to track. Footsteps sounded on the wooden porch outside. Pym moved quietly to cover the door with an unobscured angle of fire.

"Dr. Dea," said Miles, sighting through the window, "would you be so kind as to administer that fast-penta to the first person through the door, as they step in?"

"You're not waiting for a volunteer, my lord?"

"Not this time."

The door swung inward, and Dea stepped forward, raising his hand. The hypospray hissed. Ma Mattulich wheeled to face Dea, the skirts of her work dress swirling around her veined calves, hissing in return—"You dare!" Her arm drew back as if to strike him, but slowed in mid-swing and failed to connect as Dea ducked out of her way. This unbalanced her, and she staggered. Speaker Karal, coming in behind, caught her by the arm and steadied her. "You dare!" she wailed again, then turned to see not only Dea but all the other witnesses waiting: Ma Csurik, Ma Karal, Lem, Harra, Pym. Her shoulders sagged, and then the drug cut in and she just stood, a silly smile fighting with anguish for possession of her harsh face.

The smile made Miles ill, but it was the smile he needed. "Sit her down, Dea, Speaker Karal."

They guided her to the chair lately vacated by Lem Csurik. She was fighting the drug desperately, flashes of resistance melting into flaccid docility. Gradually the docility became ascendant, and she sat draped in the chair, grinning helplessly. Miles sneaked a peek at Harra. She stood white and silent, utterly closed.

For several years after the reconciliation Miles had never been left with his grandfather without his personal bodyguard. Sergeant Bothari had worn the count's livery, but had been loyal to Miles alone, the one man dangerous enough—some said, crazy enough—to stand up to the great general himself. There was no need, Miles decided, to spell out to these fascinated people just what interrupted incident had made his parents think Sergeant Bothari a necessary precaution. Let General Piotr's untarnished reputation serve—Miles, now. As *he* willed. Miles's eyes glinted.

Lem lowered his head. "If I had known—if I had guessed—I wouldn't have left them alone together, m'lord.

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I thought—Harra's mother would take care of her. I couldn't have—I didn't know *how*—"

Harra did not look at him. Harra did not look at anything.

"Let us conclude this," Miles sighed. Again, he requested formal witness from the crowd in the room, and cautioned against interruptions, which tended to unduly confuse a drugged subject. He moistened his lips and turned to Ma Mattulich.

Again, he began with the standard neutral questions, name, birthdate, parents' names, checkable biographical facts. Ma Mattulich was harder to lull than the cooperative Lem had been, her responses scattered and staccato. Miles controlled his impatience with difficulty. For all its deceptive ease, fast-penta interrogation required skill, skill and patience. He'd got too far to risk a stumble now. He worked his questions up gradually to the first critical ones.

"Were you there, when Raina was born?"

Her voice was low and drifting, dreamy. "The birth came in the night. Lem, he went for Jean the midwife, the midwife's son was supposed to go for me but he fell back to sleep. I didn't get there till morning, and then it was too late. They'd all seen."

"Seen what?"

"The cat's mouth, the dirty mutation. Monsters in us. Cut them out. Ugly little man." This last, Miles realized, was an aside upon himself. Her attention had hung up on him, hypnotically. "Muties make more muties, they breed faster, overrun . . . I saw you watching the girls. You want to make mutie babies on clean women, poison us all. . . . "

Time to steer her back to the main issue. "Were you ever alone with the baby after that?"

"No, Jean, she hung around. Jean knows me, she knew what I wanted. None of her damn business. And Harra was always there. Harra must not know. Harra must not . . . why should she get off so soft? The poison must be in her. Must have come from her Da, I lay only with her Da and they were all wrong but the one."

Miles blinked. "What were all wrong?" Across the room Miles saw Speaker Karal's mouth tighten. The headman caught Miles's glance and stared down at his own feet, absenting himself from the proceedings. Lem, his lips parted in absorption, and the rest of the boys were listening with alarm. Harra hadn't moved.

"All my babies," Ma Mattulich said.

Harra looked up sharply at that, her eyes widening.

"Was Harra not your only child?" Miles asked. It was an effort to keep his voice cool, calm; he wanted to shout. He wanted to be gone from here. . . .

"No, of course not. She was my only clean child, I thought. I thought, but the poison must have been hidden in her. I fell on my knees and thanked God when she was born clean, a clean one at last, after so many, so much pain. . . . I thought I had finally been punished enough. She was such a pretty baby, I thought it was over at last. But she must have been mutie after all, hidden, tricksy, sly. . . . "

"How many," Miles choked, "babies did you have?"

"Four, besides Harra my last."

"And you killed all four of them?"

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Speaker Karal, Miles saw, gave a slow nod to his feet.

"No!" said Ma Mattulich. Indignation broke through the fast-penta wooze briefly. "Two were born dead already, the first one, and the twisted-up one. The one with too many fingers and toes, and the one with the bulgy head, those I cut. Cut out. My mother, she watched over me to see I did it right. Harra, I made it soft for Harra. I did it for her."

"So you have in fact murdered not one infant, but three?" said Miles frozenly. The younger witnesses in the room, Karal's boys and the Csurik brothers, looked horrified. The older ones, Ma Mattulich's contemporaries, who must have lived through the events with her, looked mortified, sharing her shame. Yes, they all must have known.

"Murdered?" said Ma Mattulich. "No! I cut them out. I had to. I had to do the right thing." Her chin lifted proudly, then drooped. "Killed my babies, to please, to please . . . I don't know who. And now you call me a murderer? Damn you! What use is your justice to me *now?* I needed it then—where were you *then?*" Suddenly, shockingly, she burst into tears, which wavered almost instantly into rage. "If mine must die then so must hers! Why should she get off so soft? Spoiled her . . . I tried my best, I did my best, it's not fair. . . . "

The fast-penta was not keeping up with this. . . . no, it was working, Miles decided, but her emotions were too overwhelming. Upping the dose might level her emotional surges, at some risk of respiratory arrest, but it would not elicit any more complete a confession. Miles's belly was trembling, a reaction he trusted he concealed. It had to be completed now.

"Why did you break Raina's neck, instead of cutting her throat?"

"Harra, she must not know," said Ma Mattulich. "Poor baby. It would look like she just died. . . . "

Miles eyed Lem, Speaker Karal. "It seems a number of others shared your opinion that Harra should not know."

"I didn't want it to be from my mouth," repeated Lem sturdily.

"I wanted to save her double grief, m'lord," said Karal. "She'd had so much. . . . "

Miles met Harra's eyes at that. "I think you all underestimate her. Your excessive tenderness insults both her intelligence and will. She comes from a tough line, that one."

Harra inhaled, controlling her own trembling. She gave Miles a short nod, as if to say *Thank you, little man.* He returned her a slight inclination of the head, *Yes, I understand.*

"I'm not sure yet where justice lies in this case," said Miles, "but this I swear to you, the days of cooperative concealment are over. No more secret crimes in the night. Daylight's here. And speaking of crimes in the night," he turned back to Ma Mattulich, "*was* it you who tried to cut my horses's throat last night?"

"I tried," said Ma Mattulich, calmer now in a wave of fast-penta mellowness, "but it kept rearing up on me."

"Why my *horse?*" Miles could not keep exasperation from his voice, though a calm, even tone was enjoined upon fast-penta interrogators by the training manual.

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"I couldn't get at you," said Ma Mattulich simply.

Miles rubbed his forehead. "Retroactive infanticide by proxy?" he muttered.

"You," said Ma Mattulich, and her loathing came through even the nauseating fast-penta cheer, "*you* are the worst. All I went through, all I did, all the grief, and you come along at the end. A mutie made lord over us all, and all the rules changed, betrayed at the end by an off-worlder woman's weakness. You make it all for *nothing*. Hate you. Dirty mutie . . . " her voice trailed off in a drugged mumble.

Miles took a deep breath, and looked around the room. The stillness was profound, and no one dared break it.

"I believe," he said, "that concludes my investigation into the facts of this case."

The mystery of Raina's death was solved.

The problem of justice, unfortunately, remained.

Miles took a walk.

The graveyard, though little more than a crude clearing in the woodland, was a place of peace and beauty in the morning light. The stream burbled endlessly, shifting green shadows and blinding brilliant reflections. The faint breeze that had shredded away the last of the night fog whispered in the trees, and the tiny, short-lived creatures that everyone on Barrayar, excepting biologists, called bugs sang and twittered in the patches of native scrub.

"Well, Raina," Miles sighed, "and what do I do now?" Pym lingered by the borders of the clearing, giving Miles room. "It's all right," Miles assured the tiny grave, "Pym's caught me talking to dead people before. He may think I'm crazy, but he's far too well-trained to say so."

Pym in fact did not look happy, nor altogether well. Miles felt rather guilty for dragging him out, by rights the man should be resting in bed, but Miles had desperately needed this time alone. Pym wasn't just suffering the residual effect of having been kicked by Ninny. He had been silent ever since Miles had extracted the confession from Ma Mattulich. Miles was unsurprised. Pym had steeled himself to play executioner to their imagined hill bully; the substitution of a mad grandmother as his victim had clearly given him pause. He would obey whatever order Miles gave him, though, Miles had no doubt of that.

Miles considered the peculiarities of Barrayaran law, as he wandered about the clearing, watching the stream and the light, turning over an occasional rock with the toe of his boot. The fundamental principle was clear; the spirit was to be preferred over the letter, truth over technicalities. Precedent was held subordinate to the judgment of the man on the spot. Alas, the man on the spot was himself. There was no refuge for him in automated rules, no hiding behind *the law says* as if the law were some living overlord with a real Voice. The only voice here was his own.

And who would be served by the death of that half-crazed old woman? Harra? The relationship between mother and daughter had been wounded unto death by this, Miles had seen that in their eyes, yet still Harra had no stomach for matricide. Miles rather preferred

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it that way, having her standing by his ear crying for bloody revenge would have been enormously distracting just now. The obvious justice made a damn poor reward for Harra's courage in reporting the crime. Raina? Ah. That was more difficult.

"I'd like to lay the old gargoyle right there at your feet, small lady," Miles muttered to her. "Is it your desire? Does it serve you? What *would* serve you?" Was this the great burning he had promised her?

What judgment would reverberate along the entire Dendarii mountain range? Should he indeed sacrifice these people to some larger political statement, regardless of their wants? Or should he forget all that, make his judgment serve only those directly involved? He scooped up a stone and flung it full force into the stream. It vanished invisibly in the rocky bed.

He turned to find Speaker Karal waiting by the edge of the graveyard. Karal ducked his head in greeting and approached cautiously.

"So, m'lord," said Karal.

"Just so," said Miles.

"Have you come to any conclusion?"

"Not really." Miles gazed around. "Anything less than Ma Mattulich's death seems . . . inadequate justice, and yet . . . I cannot see who her death would serve."

"Neither could I. That's why I took the position I did in the first place."

"No . . . " said Miles slowly, "no, you were wrong in that. For one thing, it very nearly got Lem Csurik killed. I was getting ready to pursue him with deadly force at one point. It almost destroyed him with Harra. Truth is better. Slightly better. At least it isn't a fatal error. Surely I can do . . . something with it."

"I didn't know what to expect of you, at first," admitted Karal.

Miles shook his head. "I meant to make changes. A difference. Now . . . I don't know."

Speaker Karal's balding forehead wrinkled. "But we are changing."

"Not enough. Not fast enough."

"You're young yet, that's why you don't see how much, how fast. Look at the difference between Harra and her mother. God—look at the difference between Ma Mattulich and *her* mother. *There* was a harridan." Speaker Karal shuddered. "I remember her, all right. And yet, she was not so unusual, in her day. So far from having to make change, I don't think you could stop it if you tried. The minute we finally get a powerset receptor up here, and get on the comm net, the past will be done and over. As soon as the kids see the future—their future—they'll be mad after it. They're already lost to the old ones like Ma Mattulich. The old ones know it, too, don't believe they don't know it. Why d'you think we haven't been able to get at least a small unit up here yet? Not just the cost. The old ones are fighting it. They call it off-planet corruption, but it's really the future they fear."

"There's still so much to be done."

"Oh, yes. We are a desperate people, no lie. But we have hope. I don't think you realize how much you've done, just by coming up here."

"I've done nothing," said Miles bitterly. "Sat around, mostly. And now,

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I swear, I'm going to end up doing more nothing. And then go home. Hell!"

Speaker Karal pursed his lips, looked at his feet, at the high hills. "You are doing something for us every minute. Mutie lord. Do you think you are invisible?"

Miles grinned wolfishly. "Oh, Karal, I'm a one-man band, I am. I'm a parade."

"As you say, just so. Ordinary people need extraordinary examples. So they can say to themselves, well, if he can do *that*, I can surely do *this*. No excuses."

"No quarter, yes, I know that game. Been playing it all my life."

"I think," said Karal, "Barrayar needs you. To go on being just what you are."

"Barrayar will eat me, if it can."

"Yes," said Karal, his eyes on the horizon, "so it will." His gaze fell to the graves at his feet. "But it swallows us all in the end, doesn't it? You will outlive the old ones."

"Or in the beginning." Miles pointed down. "Don't tell me who I'm going to outlive. Tell Raina."

Karal's shoulders slumped. "True. S'truth. Make your judgment, lord. I'll back you."

Miles assembled them all in Karal's yard for his Speaking; the porch now became his podium. The interior of the cabin would have been impossibly hot and close for this crowd, suffocating with the afternoon sun beating on the roof, though outdoors the light made them squint. They were all here, everyone they could round up—Speaker Karal, Ma Karal, their boys, all the Csuriks, most of the cronies who had attended last night's funereal festivities, men, women, and children. Harra sat apart. Lem kept trying to hold her hand, though from the way she flinched it was clear she didn't want to be touched. Ma Mattulich sat displayed by Miles's side, silent and surly, flanked by Pym and an uncomfortable-looking Deputy Alex.

Miles jerked up his chin, settling his head on the high collar of his dress greens, as polished and formal as Pym's batman's expertise could make him. The Imperial Service uniform that Miles had earned. Did these people know he had earned it, or did they all imagine it a mere gift from his father, nepotism at work? Damn what they thought. He knew. He stood before his people, and gripped the porch rail.

"I have concluded the investigation of the charges laid before the Count's Court by Harra Csurik of the murder of her daughter, Raina. By evidence, witness, and her own admission, I find Mara Mattulich guilty of this murder, she having twisted the infant's neck until it broke, and then attempted to conceal that crime. Even when that concealment placed her son-in-law Lem Csurik in mortal danger from false charges. In light of the helplessness of the victim, the cruelty of the method, and the cowardly selfishness of the attempted concealment, I can find no mitigating excuse for the crime.

"In addition, Mara Mattulich by her own admission testifies to two previous infanticides, some twenty years ago, of her own children. These facts shall be announced by Speaker Karal in every corner of Silvy Vale, until every subject has been informed."

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He could feel Ma Mattulich's glare boring into his back. *Yes, go on and hate me, old woman. I will bury you yet, and you know it.* He swallowed, and continued, the formality of the language a sort of shield before him.

"For this unmitigated crime, the only proper sentence is death. And I so sentence Mara Mattulich. But in light of her age and close relation to the next-most-injured party in the case, Harra Csurik, I choose to hold the actual execution of that sentence. Indefinitely." Out of the corner of his eye Miles saw Pym let out, very carefully and covertly, a sigh of relief. Harra combed at her straw-colored bangs with her fingers and listened intently.

"But she shall be as dead before the law. All her property, even to the clothes on her back, now belongs to her daughter Harra, to dispose of as she wills. Mara Mattulich may not own property, enter contracts, sue for injuries, nor exert her will after death in any testament. She shall not leave Silvy Vale without Harra's permission. Harra shall be given power over her as a parent over a child, or as in senility. In Harra's absence Speaker Karal will be her deputy. Mara Mattulich shall be watched to see she harms no other child.

"Further. She shall die without sacrifice. No one, not Harra nor any other, shall make a burning for her when she goes into the ground at last. As she murdered her future, so her future shall return only death to her spirit. She will die as the childless do, without remembrance."

A low sigh swept the older members of the crowd before Miles. For the first time, Mara Mattulich bent her stiff neck.

Some, Miles knew, would find this only spiritually symbolic. Others would see it as literally lethal, according to the strength of their beliefs. The literal-minded such as those who saw mutation as a sin to be violently expiated. But even the less superstitious, Miles saw in their faces, found the meaning clear. So.

Miles turned to Ma Mattulich, and lowered his voice. "Every breath you take from this moment on is by my mercy. Every bite of food you eat, by Harra's charity. By charity and mercy —such as you did not give—you shall live. Dead woman."

"Some mercy. Mutie lord." Her growl was low, weary, beaten.

"You get the point," he said through his teeth. He swept her a bow, infinitely ironic, and turned his back on her. "I am the Voice of Count Vorkosigan. This concludes my Speaking."

Miles met Harra and Lem afterwards, in Speaker Karal's cabin.

"I have a proposition for you." Miles controlled his nervous pacing and stood before them. "You're free to turn it down, or think about it for a while. I know you're very tired right now." *As are we all.* Had he really been in Silvy Vale only a day and a half? It seemed like a century. His head ached with fatigue. Harra was red-eyed, too. "First of all, can you read and write?"

"Some," Harra admitted. "Speaker Karal taught us some, and Ma Lannier."

"Well, good enough. You wouldn't be starting completely blind. Look. A

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few years back Hassadar started a teacher's college. It's not very big yet, but it's begun. There are some scholarships. I can swing one your way, if you will agree to live in Hassadar for three years of intense study."

"Me!" said Harra. "I couldn't go to a college! I barely know . . . any of that stuff."

"Knowledge is what you're supposed to have coming out, not going in. Look, they know what they're dealing with in this district. They have a lot of remedial courses. It's true, you'd have to work harder, to catch up with the town-bred and the lowlanders. But I know you have courage, and I know you have will. The rest is just picking yourself up and ramming into the wall again and again until it falls down. You get a bloody forehead, so what? You can do it, I swear you can."

Lem, sitting beside her, looked worried. He captured her hand again. "Three years?" he said in a small voice. "Gone away?"

"The school stipend isn't that much," said Miles. "But Lem, I understand you have carpenter's skills. There's a building boom going on in Hassadar right now. Hassadar's going to be the next Vorkosigan Vashnoi, I think. I'm certain you could get a job. Between you, you could live."

Lem looked at first relieved, then extremely worried. "But they all use power tools—computers—robots . . . ."

"By no means. And they weren't all born knowing how to use that stuff either. If they can learn it, you can. Besides, the rich pay well for handwork, unique one-of items, if the quality's good. I can see you get a start, which is usually the toughest moment. After that you should be able to figure it out all right."

"To leave Silvy Vale . . . " said Harra in a dismayed tone.

"Only in order to return. That's the other half of the bargain. I can send a comm unit up here, a small one with a portable power pack that lasts a year. Somebody'd have to hump down to Vorkosigan Surleau to replace it annually, no big problem. The whole set up wouldn't cost much more than, oh, a new lightflyer." Such as the shiny red one Miles had coveted in a dealer's showroom in Vorbarr Sultana, very suitable for a graduation present, he had pointed out to his parents. The credit chit was sitting in the top drawer of his dresser in the lake house at Vorkosigan Surleau right now. "It's not a massive project like installing a powersat receptor for the whole of Silvy Vale or anything. The holovid would pick up the educational satellite broadcasts from the capital; set it up in some central cabin, add a couple of dozen lap-links for the kids, and you've got an instant school. All the children would be required to attend, with Speaker Karal to enforce it, though once they'd discovered the holovid you'd probably have to beat them to make them go home. I, ah," Miles cleared his throat, "thought you might name it the Raina Csurik Primary School."

"Oh," said Harra, and began to cry for the first time that grueling day. Lem patted her clumsily. She returned the grip of his hand at last.

"I can send a lowlander up here to teach," said Miles. "I'll get one to take

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a short-term contract, till you're ready to come back. But he or she won't understand Silvy Vale like you do. Wouldn't understand *why*. You—you already know. You know what they can't teach in any lowland college."

Harra scrubbed her eyes, and looked up—not very far up—at him. "You went to the Imperial Academy."

"I did." His chin jerked up.

"Then I," she said shakily, "can manage . . . Hassadar Teacher's College." The name was awkward in her mouth. At first. "At any rate—I'll try, m'lord."

"I'll bet on you," Miles agreed. "Both of you. Just, ah," a smile sped across his mouth and vanished, "stand up straight and speak the truth, eh?"

Harra blinked understanding. An answering half-smile lit her tired face, equally briefly. "I will. Little man."

Fat Ninny rode home by air the next morning, in a horse van, along with Pym. Dr. Dea went along with his two patients, and his nemesis the sorrel mare. A replacement bodyguard had been sent with the groom who flew the van from Vorkosigan Surleau, who stayed with Miles to help him ride the remaining two horses back down. Well, Miles thought, he'd been considering a camping trip in the mountains with his cousin Ivan as part of his home leave anyway. The liveried man was the laconic veteran Esterhazy, whom Miles had known most of his life excellent company for a man who didn't want to talk about it, unlike Ivan you could almost forget he was there. Miles wondered if Esterhazy's assignment had been random chance, or a mercy of the Count's. Esterhazy was good with horses.

They camped overnight by the river of roses. Miles walked up the vale in the evening light, desultorily looking for the spring of it; indeed, the floral barrier did seem to peter out a couple of kilometers upstream, merging into slightly less impassable scrub. Miles plucked a rose, checked to make sure that Esterhazy was nowhere in sight, and bit into it curiously. Clearly, he was not a horse. A cut bunch would probably not survive the trip back as a treat for Ninny. Ninny could settle for oats.

Miles watched the evening shadows flowing up along the backbone of the Dendarii range, high and massive in the distance. How small those mountains looked from space! Little wrinkles on the skin of a globe he could cover with his hand, all their crushing mass made invisible. Which was illusory, distance or nearness? Distance, Miles decided. Distance was a damned lie. Had his father known this? Miles suspected so.

He contemplated his urge to throw all his money, not just a lightflyer's worth, at those mountains; to quit it all and go teach children to read and write, to set up a free clinic, a powersat net, or all of these at once. But Silvy Vale was only one of hundreds of such communities buried in these mountains, one of thousands across the whole of Barrayar. Taxes squeezed from this very district helped maintain the very elite military school he'd just spent—how much of their resources in? How much would he have to give back just to make it even, now? He was himself a planetary resource, his training had made him so, and his feet were set on their path.

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What God means you to do, Miles's theist mother claimed, could be deduced from the talents He gave you. The academic honors Miles had amassed by sheer brute work. But the war games, outwitting his opponents, staying one step ahead—a necessity, true, he had no margin for error—the war games had been an unholy joy. War had been no game here once, not so long ago. It might be so again. What you did best, that was what was wanted from you. God seemed to be lined up with the emperor on that point, at least, if no other.

Miles had sworn his officer's oath to the emperor less than two weeks ago, puffed with pride at his achievement. In his secret mind he had imagined himself keeping that oath through blazing battle, enemy torture, what-have-you, even while sharing cynical cracks afterwards with Ivan about archaic dress swords and the sort of people who insisted on wearing them.

But in the dark of subtler temptations, those which hurt without heroism for consolation, he forsaw, the emperor would no longer be the symbol of Barrayar in his heart.

Peace to you, small lady, he thought to Raina. *You've won a twisted poor modern knight, to wear your favor on his sleeve. But it's a twisted poor world we were both born into, that rejects us without mercy and ejects us without consultation. At least I won't just tilt at windmills for you. I'll send in sappers to mine the twirling suckers, and blast them into the sky. . . .*

He knew who he served now. And why he could not quit. And why he must not fail. ■

HANK JANKUS, 1929–1988

Hank Jankus, whose illustrations frequently appeared in *Analog* and other science fiction magazines, died October 15 at his home in Kansas City, Kansas. He had been confined there by illness for eight months, but continued to work even during that period.

Despite a lifelong interest in science fiction, he did not become a professional illustrator in the field until 1977. Before that, he had been a sergeant in the Marine Corps, studied at the Kansas City Art Institute, and founded the advertising firm of Jankus & Associates. His first illustrations were commissioned by *Shayol*, and during the ensuing decade-plus his work appeared in many magazines, including *Analog*, *Asimov's* and *Amazing*, and on the covers of several books.

He is survived by his wife, Virginia Jankus, his parents, and a sister.

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futures

Matthew J. Costello

Walking into the preview screening, I had every reason to suspect that Vestron Pictures's *The Lair of the White Worm* (at your neighborhood video mecca from *Vestron Video)* would be a definitely outré exercise.

First, there was the source material, Bram Stoker's last novel, *The Lair of the White Worm*. The title alone seemed instantly able to provoke mirthful grins at the potential for double entendre.

Then there was the director, Ken Russell. I've been a fan of Russell's films since his peaceful 1968 biography of the English composer, Delius, *Song of Summer*. Russell's work has been off-again, on-again commercially successful, including such pictures as *Altered States* (1980), *Crimes of Passion* (1984), and his look at Mary Shelley's creation of Frankenstein, *Gothic* (1987).

Heading into *Lair*, surely one could expect almost anything. Stoker's story—about a serpent cult dating back to the good old days of the Druids—was, Russell said, "based on fact." But Stoker's story is similar to Dracula, only "Instead of bats and a man doing the biting it was worms and an attractive woman."

Russell's script took as its starting point the legend about the fabled worm, the pagan cults, and the Roman invaders. An archaeologist, Angus Flint (Peter Capaldi) excavates a prehistoric skull of an unknown species, and meets Lord James D'Ampton (Hugh Grant), the ancestor of the Lord who slew the worm ages ago.

Things get interesting when Lady Sylvia Marsh (Amanda Donohoe) rents a gothic mansion called The Temple. Lady Sylvia, a worm cult member, is able to slither at will. She steals the prehistoric skull and plans to revive the worm with the blood of a virgin.

The possibilities for shocking, and funny, images were not lost on Russell. There are wild fantasy scenes mixing images of Roman legionnaires and a Christ-figure entwined with a serpent. Lady Sylvia plays snakes and ladder while awaiting a hot-blooded young guest who will be her first victim. And she has a penchant for hiding in wicker baskets.

Russell's film vacilates from the droll to the serious, just as he intended. "One of my favorite pastimes is keeping an audience guessing as to whether I'm being serious or not, and this film fit the bill perfectly."

But for all the kinky images, Russell is true to his story's source. There's a gentle, pastoral feel to the horror tale. It is witty and reflective, never letting the fantasies overwhelm the musty horror.

Then there's *Killer Klowns from Outer Space*.

Now, wait a minute. I know what you're thinking. Killer Klowns from Outer Space? Give me a break!

(continued on page 147)

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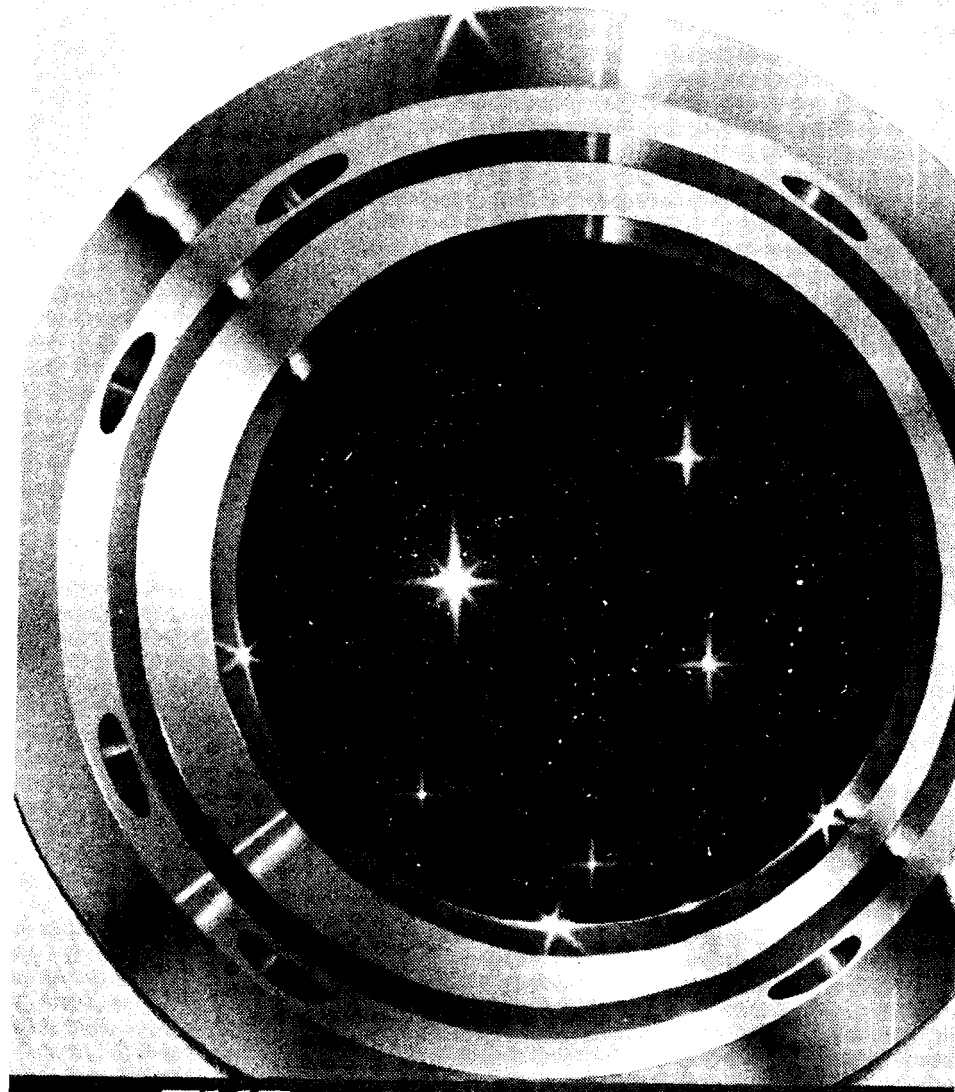

THE ECONOMICS OF INTERSTELLAR COMMERCE

Warren Salomon

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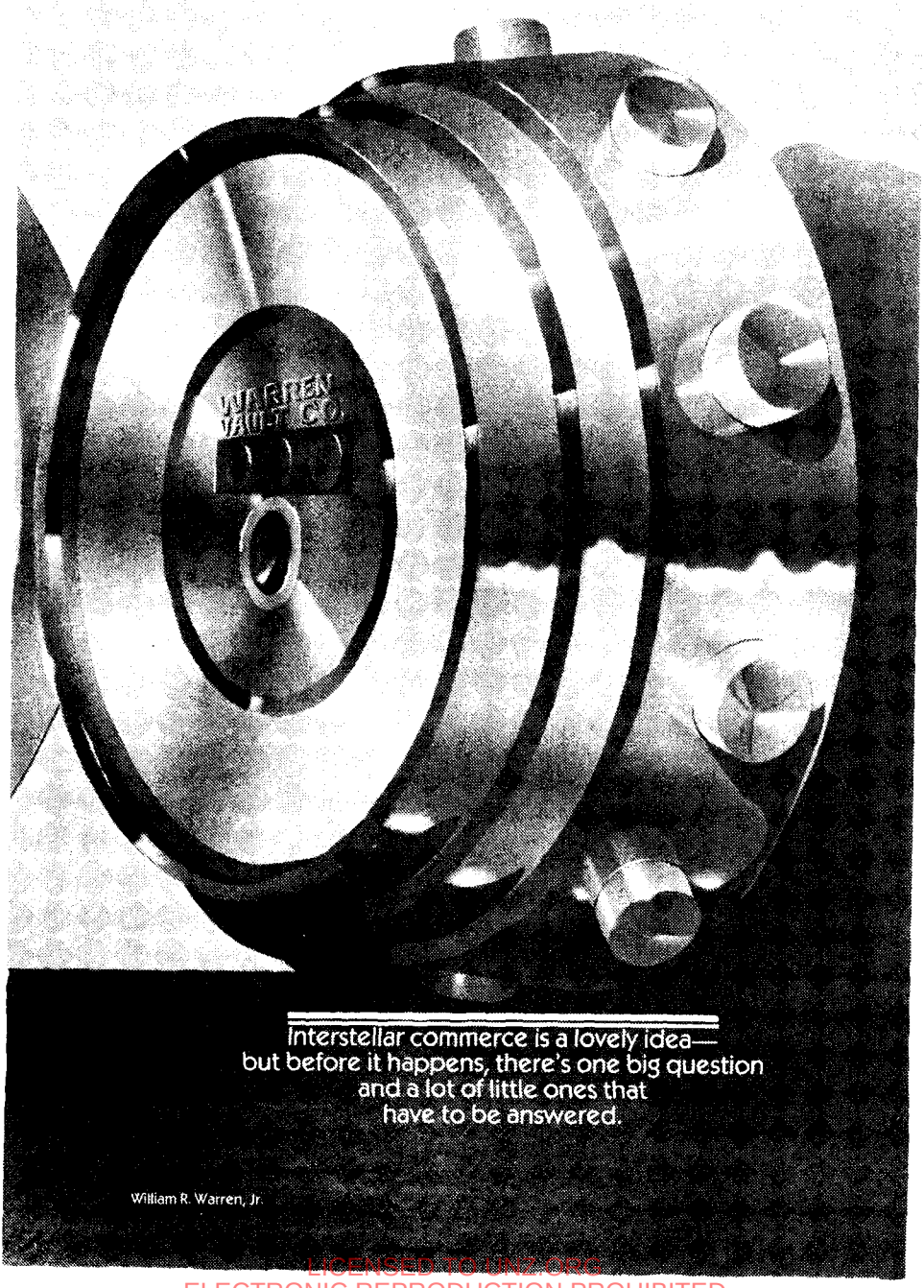

Interstellar commerce is a lovely idea—
but before it happens, there's one big question
and a lot of little ones that
have to be answered.

William R. Warren, Jr.

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Why don't we have a vast literature of imagination which assumes, as a background concept, that there will be a mass transit system linking us to Antarctica? No doubt it's because such a transit system is fundamentally ridiculous. Travel to Antarctica is certainly possible, but there is no reasonably foreseeable demand for mass transit, and therefore tales of adventure on the "Antarctica Express" would be inherently unbelievable.

Yet it is a postulate of science fiction that one day there will be routine travel between the stars. And that means we're all assuming that interstellar travel (however it may be done) will be commercially viable, that it will be self-supporting—somehow.

But sooner or later reality must intervene, and whoever writes the checks (or the future equivalent) is going to say: "Starships are very nice to dream about, but if you want me to pay for a dozen-year voyage to who-knows-where, you'd better explain what's in it for me."

That might not match your heroic vision of the future, but it most definitely is the way of the world, so perhaps it's time to take a cold, hard look at economic realities, and ask ourselves the Big Question—*Why* is anyone going to pay the price? Or, to put the matter bluntly, can we make a buck out there?

I'm going to ignore all those SF tales that are filled with ingenious ideas about *how* interstellar journeys will be made. Those ideas are certainly interesting, but most of them would be very expensive—some of those ships might cost the gross "national" product of our whole planet. Even if such ships are technically feasible, we're still faced with the Big Question—Is there money to be made in interstellar commerce?

Let's be clear about what's involved in this question. I'm not talking about whether anyone can profit from shipbuilding, or supplying equipment for the crew, or providing fuel, or any of a thousand other peripheral activities. If someone is willing to pay for interstellar voyages, there will of necessity be a demand for ships, equipment and fuel; and businesses will naturally spring up to fill those needs. What I'm getting at is a more fundamental issue—what makes the *whole venture* economically worth the bother? Where will the funds come from to pay for interstellar voyages?

Science fiction literature is filled with endless blather about the "sense of wonder," mankind's love of adventure, and our insatiable quest for knowledge. These motives exist, and no doubt some ships will be launched for those reasons. But what will keep the activity going on a continuing basis? Why will fleets of ships be built and launched decade after decade, generation after generation, century after century? Just for the sheer joy of it? I think not.

Our sense of wonder is very real. It's sufficient, for example, to keep this magazine in business. But magazines are considerably cheaper than starships. Obviously our quest for knowledge, by itself, is not the answer to the Big Question. If star travel is to be an ongoing affair, it's got to be profitable. So where are the profits in interstellar voyages?

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To answer that question with our limited knowledge at this time, we'll need to make a few assumptions. We shall base our assumptions on human nature, which certainly won't change, on the probable likelihood of rapid technological progress, and on what we now know (or think we know) about how the universe works. And if we're wrong . . . well, an essay like this is an admittedly risky undertaking.

Our first assumption involves technology. Obviously, it's absurd to guess what technology will be available a century or two in the future—so we won't seriously try. Also, we shall ignore the possibility of "miraculous" discoveries. The invention of instantaneous (or at least faster-than-light) communications and transportation will profoundly alter the economic assumptions in this essay—as well as everything else in the world—but such a prospect now seems unlikely. We'll also ignore the possibility of technological shortcuts derived from encounters with star-faring aliens, eager to engage in trade. That could happen (eventually it's probably inevitable), but its timing is so unpredictable that it's outside the scope of this essay.

In the area of technology, let us (blithely?) assume that starships (or starliners, or plain old "ships," or whatever they'll be called) will be built. Don't ask me how they'll work; we're just assuming that somehow they will. They'll be expensive items of equipment—not nearly as expensive as our present-day moon rockets, but quite costly nevertheless—probably on the order of present-day supertankers, which are relatively conventional in terms of available technology (as starships presumably will be) but which are still quite costly. This means that if a cargo isn't extremely valuable and in great demand, it won't be worth the expense of transporting it.

And let us further assume that interstellar travel and communications will be limited by the speed of light—which as far as we know is a natural constraint. Also—optimistically—let's assume that starships will be able to travel at fairly close to light-speed, so that voyages won't require centuries of transit time.

All right then. We've made some technological assumptions, and they seem to be reasonable for the foreseeable future. Beyond that, by definition, we can't foresee. Now what?

Now let's consider our first problem, which is: Where are these expensive starships going to go? That shouldn't be a very big problem. There are approximately 300 stars within 35 light-years of the Sun. Few of them are Sun-like, and presumably fewer still will have Earth-like planets, but now that we've developed our starships, let's not get pessimistic. We shall make yet another assumption: Within a realistically achievable distance—the working lifespans of a starship's crew—there will be numerous destinations to choose from.

OK, we've got ships and places to go. Let's consider problem number two. Even traveling at near light-speed, interstellar trips take a long time, don't they? Sure, but SF literature has worked that out long ago. If your destination is ten light-years away, and your ship is

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traveling at a reasonably good (and presently unattainable) clip, you won't age ten years during the trip. For a ship moving at near light-speed, time dilation requires that in terms of your subjective, shipboard life span, the voyage won't be much more time-consuming than, say, one of Francis Drake's pirate raids.

For those who care about the actual numbers, I've got a few. If you could travel at about 99.49% of light-speed (ignoring lesser velocities involved during the beginning and ending phases of the voyage) the time aboard ship will pass at only 10% of Earth's time. At about 99.87% of light-speed, ship's time is only 5% of Earth's time. Therefore, a ten light-year voyage at 99.49% of light-speed will age the crew only one year; and at 99.87% of light-speed, only six months. So if we assume that we'll have fast enough ships (and a fantastic energy source to power them), you could make quite a few interstellar voyages in a productive lifetime—if it were worth your while to do so. But would it be?

This brings us to problem number three: Assuming there are adequate ships and places to go, and the crew's lifespans aren't a problem, why would fleets of expensive vessels be launched to go there? That's another way of asking the Big Question, and we'll spend the rest of this essay trying to answer it.

But before continuing, let's be sure we're all together. I suspect that the Big Question may have taken some of you by surprise. After all, there are abundant examples of terrestrial, trans-oceanic trade, which at first glance seem to provide models for interstellar commerce. For example, the Japanese import raw materials to their resource-poor islands, transform the materials into automobiles, send the finished goods across the Pacific, and sell them in the United States—and they make a lot of money doing so. Couldn't the same kind of thing work among the stars?

Not necessarily. The times and distances (and therefore the costs) involved are not analogous—not even close. The distance to the Sun's nearest stellar neighbor is approximately *five billion* times the distance from Japan to California. Therefore the model of trans-oceanic trade is virtually useless.

It's often been assumed that there would be interstellar freighters and ore ships based on the trans-oceanic model, but is this assumption realistic? Consider the importation of raw materials to the Earth. Sure, resources might vanish from the Earth, or become unimaginably expensive, although this is doubtful. Still, we won't be using starships to import raw materials. We can always mine the asteroids, or Jupiter's moons. They're millions of times closer, and therefore far cheaper. So unless there are minerals out there we've never dreamed of, and that we can't synthesize closer to home, we can forget about interstellar ore boats.

It's not raw materials that we'll lack in the solar system, it's cheap labor. But the cost of labor on Earth would have to be incredibly high to justify an interstellar flow of manufactured goods.

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It's conceivable, of course. We can easily imagine a future political setup (the post office scenario) in which all nations on Earth are so bogged down with artificially high labor costs and archaic work rules that the "cheapest" Earth-made automobiles would cost, relatively, what a Rolls Royce costs now. But ask yourself—would even that kind of economic insanity justify an interstellar transportation system, with a ten- or fifteen-year (Earth viewpoint) transit time?

Probably not. The unions would take care (if they were clever) that terrestrial prices never got so high that the interstellar free-traders would have a competitive advantage.

Even if Earth was devastated by war (a common SF scenario), we could rebuild our factories faster than we could import finished goods from the stars. Remember, after the destruction of World War II, Western Europe was back in business within a few short years.

So we need to assume a really amazing manufacturing advantage that would make goods from the stars so valuable as to be worth the cost—and years of transit time—of shipping them to Earth.

Is that realistic? Maybe. Some goods are unique—like the products of newly created technologies. Ah, but would new colonies develop such technologies? And even if they did, there's always the risk of industrial espionage; and anyway, by the time the products got to their distant market (Earth), would they still be state of the art? A dozen years of transport time can dull a product's competitive advantage.

Besides, absent a new terrestrial dark age (another common SF scenario), interstellar shipments are going to be pretty much a one-way street. Earth will have technologies the new worlds need, at least in the early stages of our interstellar expansion. They (the colonies) will need goods from Earth, but not vice versa. In marketing terms, they're going to be like the natives of Bangladesh—we know they're out there, and they want what we produce, but what's in it for us? The problem for an interstellar merchant is finding something Earth can buy from the new worlds.

Well, what can the new worlds export? It'll be a long time until the new worlds are out-inventing Earth. All their technology will be old stuff, made with machines they took with them. But even old technology can be unique if it involves secret processes. Sure, but does Coke's secret formula justify the cost of interstellar freight? What else have they got?

Artwork is unique. Persian rugs are regionally specific, labor-intensive products. Havana cigars and French wines require special climatic conditions. Extra-terrestrial analogs of such items could be traded. But it would take a lot of future Picassos, cases of Coca-Cola, bottles of Chateau Betelgeuse, Oriental(?) carpets, and interstellar stogies to support a galactic merchant fleet. Anything else?

There's the possibility of Dune-like spice, or Star Trek's dilithium crystals, or some other wonder goods—but we can't count on their existence. For the

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moment, let's ignore this problem, and arbitrarily assume that something, say automobiles, will be worth shipping from one planetary system to another. This (the Toyota scenario) is our biggest, wildest assumption so far, but let's play with it for a while, and see how it goes.

If you were a star-faring merchant considering the purchase of a shipload of cars from, say, Epsilon Eridani, which is almost 11 light-years away from Earth, how would you know what market conditions were like on Earth? It'll take you 11 years (actually 10.8 or so, but let's not be fussy) to send a message to Earth ("Cars for sale. Want some?") and 11 more years to get a reply ("Yes, we'll take a few."). By the time you got that reply, the information would be 11 years out of date. Perhaps Marco Polo could operate like that, but things were somewhat different then.

Ah . . . let's assume that you don't need to send an inquiry to Earth. Instead, imagine that Earth is always broadcasting its needs, so you touch down on a manufacturing planet circling Epsilon Eridani (which we'll call "EE") and you get the latest info (11 years old) from Earth—"Hot market here for cars from EE." Fine. Now what?

Now you start thinking like a merchant. What kind of mark-up could you expect that would justify buying a starship-load of cars and tying up your capital (or paying interest on a loan) for the dozen years you would need to get those cars to your destination? I said a dozen years, because your ship will certainly be slower than the communications system. Bear in mind that you'd be making an investment in goods that might very well be obsolete when they finally arrived. And if Earth is dominated by strong labor unions (as they would have to be to make scarce, extraterrestrial labor a bargain) they'll have a full range of protectionist legislation to keep out cheap imports. And what kind of import duties would you have to pay in order to clear your cargo through Earth customs?

The only way your venture could work is if you could know, a dozen years in advance of your arrival on Earth, what your sales price and other costs would be. Could you? Maybe.

It's possible for that broadcast of Earth's needs to be some kind of continuing offer, containing price and terms, and by acting on it you could be assured of selling your cargo at those prices — even though your cargo would be a dozen years old when your ship arrives on Earth. That would require an automobile dealer on Earth to commit himself, years in advance, to pay a healthy price for cargo he hoped would be arriving—some day. Maybe his broadcast offer would say, "Irving's Interstellar Imports needs 100 cars, as of the year 2200. Will pay 30 Heinleins each, plus all import taxes, if they get here by the year 2224 (that's 11 years for Irving's offer to get to EE, and 13 more for the goods to be produced and sent from EE to Earth). This offer guaranteed by irrevocable letter of credit from Bank of Terra."

The "offer" would have to be offi-

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cially registered somewhere at EE, and if you accepted it, that too would be registered, so the next interstellar entrepreneur arriving at EE wouldn't duplicate the order. Irving only wants 100 cars, not 100 million. A message would then be sent to Earth saying that the goods were on the way.

Would that do it? Perhaps, if there were strict laws that made that kind of deal a binding contract. And if the Bank of Terra were still in business when you arrived. And if there were no currency depreciation. And perhaps a thousand other things. Maybe a local branch of the Bank of Terra on EE would use that broadcast offer as collateral, and make you a loan equal to the cost of your cargo and the cost of the loan, plus some profit. Nice deal. Then you pay for the cars, leave the profit on deposit (with interest compounding) and you head for Earth to deliver your cargo to Irving.

The bank should do quite well, too. The loan is secure (it's backed by the Bank of Terra on Earth, and your ship is insured by Interstellar Lloyds). Your profit deposit is going to sit on EE, waiting about 24 years until you return. With a loan portfolio and a deposit base like that, interstellar banking should be a super-profitable industry.

When you arrive on Earth with your cargo in good condition, the Bank of Terra (on Earth) broadcasts to its branch (on EE) that everything's fine, and you can withdraw your funds. (We've just described how a "letter of credit" works today in international trade.) And observe, future bankers, that it can take decades for funds to clear. That's one hell of a profitable float. Faster-than-light communications would probably be a banking disaster!

Now you dash back to EE, most likely with an outward bound cargo arranged in the same manner. Both the trip to Earth and the return to EE take a short time, subjectively (about two or three years all together, depending on how much beyond 99% of light-speed you're traveling), and when you get back to good old EE, you're a rich man—depending on the tax laws that have been enacted on EE during the 24 or so years of your absence.

That sounds like it could be workable, but does this Toyota scenario make any sense? Would an automobile dealer on Earth (or any other interstellar destination) offer to pay for a shipload of cars (or whatever) which wouldn't arrive for two dozen years?

It's unlikely, but not impossible. A deposit of 20¢ now, compounding annually at only 7% per year, grows to a dollar in 24 years. At an interest rate of 10% per year, you only need to deposit about ten cents. So our terrestrial auto dealer only has to put up a small deposit now with the Bank of Terra to have the payment guaranteed in 24 years. And if the deposits come from his customers, the auto dealer isn't even investing his own funds. The only risks are structural ones—the bank may fail, the laws may change, the currency may depreciate, there may be war, plague, etc. But these are risks that could be faced, and gladly—if the lure of huge profits were there.

It makes even more sense if the cus-

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tomer doesn't have to wait 24 years, which is possible. He makes his 10% deposit, then goes off on an interstellar trip, and returns to Earth a couple of subjective years later, while 24 Earth-years have passed, and . . . ta da! His car is waiting for him, all paid for. Of course it's an old-style car, but that's OK. He's technologically like Rip Van Winkle. Unlike Rip, he's still young, but he's hopelessly out of date, and not trained to use new vehicles. (We're assuming rapid technological progress, remember?) Interstellar travelers need old-style goods (and probably live in behind-the-times communities with their contemporaries) so the years of transit time your cargo requires turns out to be a desirable feature.

The Toyota scenario makes more sense now than it did when we (in our desperation) first invented it.

But we're getting ahead of ourselves. Before you can import cars from the stars, you'll need flourishing settlements out there. If you're going to make a living as an interstellar merchant, you'll need lots of settlers with lots of equipment to make the inventory you'll be hauling off to Earth—or wherever. And those interstellar settlers will be your market for whatever goods you'll bring back on the return leg of your trading voyage. So they need to be not only productive, but rich enough to pay for goods hauled in from other systems.

I realize that factories could be automated, but why would anyone build automated factories on an unpopulated EE? Certainly not to place the factories near EE's raw materials—we've got the asteroids, remember? So there won't be factories (or markets) on EE unless people are there.

I don't know (and can't even guess) the figures, but it's a safe bet that it will cost a bundle to set up a successful interstellar (extra-solar?) community. Setting up a new world, years of travel-time away from Earth, requires a whole lot of talented, highly trained people so we can end up with a productive, self-sustaining society at the other end—and there are no guarantees of success. In case you doubt that, remember that after many costly attempts, Spain was *never* successful in planting a self-sustaining settlement in Florida—and they tried for 300 years!

So we have another problem: Where do all the people come from?

Finding settlers will be no problem. I'd probably volunteer myself. But who will pay for the settlement's equipment and transportation? And even after the pioneers arrive at their destination, it's probably the work of a generation or two just to get things up and running. So we're back to the Big Question: Why is anyone going to bankroll this operation?

Earth won't tax itself for centuries to sustain a colony on EE, just for the thrill of it all. Governments will finance a few voyages, sure, and maybe a quasi-permanent science colony, like Antarctica. But beyond that, forget it. If we're going to have thriving interstellar settlements, it will have to be the result of private, voluntary activity.

But won't that happen more or less automatically? I don't think so.

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We should recall that the great trans-oceanic explorations on Earth were undertaken for the purpose of finding a quicker, cheaper route to the Orient—a place where traders were already going by overland routes—in pursuit of goods for which there was already an established market (the Dutch East India Company scenario). Those incentives don't exist where the stars are concerned, so unless we can come up with some good ideas, it won't be private investors using their own funds who first go to the stars.

After the first few interstellar exploration voyages, presumably financed by governments or universities, what comes next? What is the next step that will keep the ships being built, and crewed, and—financed?

Consider examples from Earth's history. After the explorations of Columbus (a government-financed project) several early follow-up voyages were made—to secure territory and trade routes (originally presumed to lead to the Orient) which Spain's maritime rivals might otherwise grab, and to carve out great estates for land-hungry pioneers. By the early 1500s, government-chartered agricultural settlements (using indigenous slave labor) had been established throughout the Caribbean.

Agricultural ventures (and the lure of free land and slaves) alone were sufficient to cause adventurers and would-be grandees to cross the Atlantic, but if that were all there was, the "winning" of the New World would have been a very slow process, like the gradual colonization of North America. What caused the immediate glory, the gunships, the pirates, and the huge fleets of Spain's early trans-oceanic empire?

The real payoff was gold. Cortez's conquest of the Aztecs in Mexico and Pizarro's conquest of the Incas in Peru yielded sudden, incredibly vast quantities of gold, silver, and gems—which flooded back to Spain in a profitable stream that continued for almost 200 years. Ultimately, Spain's trans-oceanic empire was financed by plunder.

But neither agriculture nor plunder (the Spanish scenario) will be a likely incentive for interstellar travel. We won't find any Aztecs, and agriculture is absurd. A settlement on an Earth-like planet may swiftly become self-sufficient, but no set of circumstances that would make it worthwhile to grow sugar or tobacco on a distant planet, and then transport it for years in an expensive starship, and finally sell it profitably to consumers on Earth. It would probably be cheaper—by far—to irrigate the Sahara!

So the Big Question rears its head again: Who would finance a settlement on another planet, in another system?

At this point, it's difficult to imagine a group of private investors pooling their funds to develop and build the first starships, and then launch them on a voyage of decades—unless they know something we don't know (and therefore can't consider) about what they're going to find when they get there. People don't make investments unless they can see a reasonable possibility of earning a return. Where is the profit from the first ship to the stars? Or from the tenth ship,

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for that matter?

Tourism has been suggested as a possible free-enterprise method of financing space travel ("Space Tourism—The Door into the Space Age," by Patrick Collins, *Analog*, June 1988). But hotels in near-Earth orbit are one thing, and hotels on EE are quite another. As with all other interstellar schemes, the Earth-bound investors might not live long enough to get a return on their investment. So the Big Question appears again—why would any sane Earthman invest his money in a tourist complex (or anything else) on EE?

It's starting to look grim. We've already gone and figured out a (fairly rickety) system for buying celestial Toyotas on EE and selling them on Earth; but now we can't figure out how to get a colony going on good old EE in the first place. Maybe you can't get there from here.

But let's not give up. Rome wasn't built in a day either. But, of course, building Rome was easy compared to an interstellar common market—not to mention Trantor! How do you get "over the hump" of getting it all started? And we keep coming back to the Big Question: Why would anyone pay the bills?

Let's go back and consider a few more possibilities suggested by Earth history: Maybe extraterrestrial (no, extra-solar) settlements could start out as military posts, perhaps to protect trade routes (uh, what trade?) or claims to valuable resources (uh, valuable to whom?—we've still got the asteroids). Hmmmm. No good.

Let's start again. As a result of terrestrial, international rivalry, the superpowers of the future start sending out interstellar explorations. That could happen. Governments traditionally do expensive things with taxpayers' money that individuals would never do voluntarily. Or universities (spending government funds) send out exploration ships to do research. This could happen, too. We've already assumed that the early voyages may be financed by these methods. But either way (via government or academia) what you end up with is Antarctica—not Boston Harbor. Now what?

How about using the Vikings, or the Polynesians as a model. They just built their ships and went exploring. Period. Probably pushed by population pressures. But that won't work for the stars. Their ships didn't cost very much, but starships do. And besides, there are cheaper ways to keep the population down than building enough starships to make a difference.

Well, we can do what the Portuguese did to encourage exploration, and the Spanish. There could be a system of land claims, where whoever gets to a world first can own it—forever. Maybe even with a fancy title to go with it. That might work (although, as the descendants of Columbus will attest, such promises are rarely kept). Lots of the early settlements in North and South America started out as proprietary colonies. A well-financed corporation might invest the funds necessary in order to own a whole world. If some land were then made available to settlers, they might come—eventually.

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I can make it even more interesting. We can set it up like one of those multi-level distributorship deals. The owners of the first ship get a claim on their planet, and their colony pays a perpetual percentage of its profits to the home-world proprietors who financed the deal. Then, as the new world launches ships of its own, they repeat the process, and a small percentage from these secondary ventures is skimmed off for the homeworld, too. In commercial terms, the original proprietors get an "override" commission on all future worlds settled by their colony.

You can keep this kind of thing going forever. As long as there are new worlds to conquer, there will be an endless profit stream flowing back down the pipeline, with each parent world in the discovery chain taking its cut and passing on a dividend to the world before it, all the way from the far periphery of the galaxy to the original homeworld. And then there are other galaxies . . . growth without end— forever. Talk about pyramid schemes!

But for the investors at any stage in the drama, it's a huge, long-term gamble—one that might not pay off for generations. And if you know your history, you'll recall a phenomenon known as revolution. By the time things started to look rosy for the investors, the settlers they've bankrolled will no doubt change the rules of the game. Goodbye, empire; hello people's republic of whatever. Pyramid schemes are never a very sound investment.

Here's another possibility: How about penal colonies? Remember Australia? Remember Georgia? But why build a starship for that purpose? It's a lot cheaper to build prisons on Earth.

Have we run out of ideas? Not yet.

There's another group of possibilities we'll lump together as the libertarian scenario. It's well known that people will abandon their homes and migrate to the most inconvenient places in order to escape silly government regulations. Las Vegas exists in the middle of a desert merely because of an absence of gambling prohibitions. Switzerland prospers (without resources) because of its neutrality, and its liberal banking laws. Other unlikely places are densely populated and prosperous, not because of any natural advantage, but because of an absence of restrictive laws—Hong Kong, for example. You can name a dozen off-shore banking centers, tax havens, etc., that would likely be impoverished backwaters, but for the congeniality of their legal systems. It's possible that inhospitable interstellar locations could develop as libertarian refuges, for immigrants seeking nothing more than freedom from excessive governments. After all, that's pretty much how the U.S. was populated.

Once such a world was established, settlers would find their way. People escaping conscription, smugglers, fugitives, people running away for any of a thousand personal reasons. Some of these would be excellent settlers, some would not. There'd be no way to pick only the best and brightest. The very existence of an agency screening out undesirables would contradict the *laissez faire* nature of the destination. Prob-

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ably the hardships inherent in surviving in a new world would quickly weed out those who were unfit. You can't run away from mother nature. The libertarian scenario is a bit messy, but freedom is an inherently sloppy condition.

Once we have extra-solar worlds as centers of outlawed, black market (i.e., free market) activities, all sorts of ideas come to mind: illegal drugs could be grown on the new worlds—which conjures up cliché images from old pulp magazines of swift interstellar clippers running contraband past Earth's cumbersome, bureaucratic blockades.

The libertarian scenario has its dark side. Off-world populations could be used for organ banks and baby farms. Wealthy but aging travelers from Earth could travel to EE (requiring only a few short years of subjective travel time), get fixed up with a new set of insides, maybe have a child (carried by a sturdy EE peasant woman), and then return to Earth, rejuvenated, replicated, and reaping the results of a compound-interest deposit left behind.

Maybe we're getting somewhere now, with a concept of extra-solar worlds which is both fascinating and repulsive—worlds which specialize in black market goods and services, worlds offering commerce both free and sordid, populations both liberated and degraded, distant worlds of rejuvenation and degeneration.

Consider this example of what interstellar travel agencies might advertise: "Take a few years (subjective) out of your life, earn a few decades (Earth time) interest on your money, and travel to exotic EE, where your every wish can be fulfilled." Attractive or not, is it plausible?

No, because we still can't figure out how to finance the early ships! This is just as impossible as the Toyota scenario (although the libertarian "products" make trade with Earth much more likely). So the libertarian scenario—fascinating though it is—will have to wait.

We're getting desperate now. We've got ships, we've got places to go. Time and distance are no problem. Compound interest makes long voyages worthwhile, and we've worked out a system of interstellar finance. We can even imagine some kind of commerce going on. But how can we get interstellar colonies organized and self-sufficient? Where will the funds come from? The Big Question looms as large as ever. Can it be done?

Maybe. Remember the tremendous profits to be made from the banking system, if only we could think of a way to get it started. Surely, with wealth like that waiting to be made, someone will think of a way. How about this:

Our venturers might not have to wait decades for a return on their investment. Remember time dilation—a round trip to EE takes about 24 years, Earth time, but only about 3 years, ship's time. Investors could get a much quicker payoff (subjectively) if they go along for the ride. Not that they'd have any desire to become settlers. All they want is to stay alive long enough to reap the rewards of their enterprise. A rich man could put part of his portfolio at interest

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on Earth, invest the rest in an exploration company, and then climb aboard ship. After 24 years have passed on Earth, he returns only 3 years older, finds a potful of money waiting for him in the bank (his left-behind deposit has multiplied 5 or 10 times, depending on interest rates) and he also owns the beginning of a thriving business on EE. After another trip or two, he's incredibly rich, still relatively young, and now his investment on EE should be starting to pay off.

This is the scenario of star-traveling investors, who become centuries old by Earth's reckoning, with fortunes (and maybe families) established on several worlds. It's quite possible that something like this will happen. In fact, this scenario is so tempting that it may be the answer to the Big Question!

All right. Star-traveling investors and bankers will pay for the first ships. But we still have a problem: What about the settlers, the workers, the pioneers? Who buys their tickets? Can we realistically expect our star-hopping venture capitalists to pay for everyone's passage? Not likely. We need people who can pay their own way. And we need a lot of them.

How about religious settlers? That's happened before—the Puritans, the Quakers, the Mormons. The outcast sects of the future would go to the stars (if they could afford it) because they had no realistic alternatives, and in time their settlements would flourish—and produce those cars (if not the illegal services) that Earth might one day want to buy. Maybe—but where will they get the money for the voyage?

How about this one—welfare costs money, lots of it. Consider someone who is 20 years old, on welfare, and who is also having a kid every year—kids who (alas) are likely to be future welfare candidates. This fruitful but impoverished individual is going to cost the taxpayers plenty—as long as we have the kind of setup we do now. I imagine such a person costs the taxpayers (in today's dollars) at least $25,000 per year (factoring in the cost of bureaucratic overhead for the welfare system, plus schools, health care, police, etc.), and if our welfare recipient lives a normal lifespan, these costs will go on for about 50 years. Plus the costs of the next generation, and the next, ad infinitum.

If the government borrowed $400,000 at 6% interest, payable annually for 50 years, they could pay off that debt at a cost of $25,377.71 a year—which is our estimated first-generation welfare person's annual cost. We don't know what a one-way ticket will cost on a colony ship, but (assuming these figures are translated into future currency) if it's anything less than $400,000, a "welfare buyout" resulting in a ticket to EE looks like a worthwhile investment for the taxpayers.

Not only that, but if the government (i.e., the taxpayers) paid the fare, it would also be a way to subsidize the fledgling starship companies. This is how mail-carrying contracts once helped out our infant airlines. Provided the people don't mind paying subsidies for someone else's business, it could work.

Remember, if the government pays

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for the "settlers" to be transported to good old EE, we're free of their welfare burden forever. As much as I'm opposed to paying taxes, I like this idea—the Liberia scenario. It would be cheaper to halt welfare and forget about the stars, too, but the former won't happen any time soon, and I don't want to do the latter.

So after exploring numerous scenarios, here's the model we've finally arrived at: Ships paid for by star-traveling investors, who finance the banks and the infrastructure. Settlement by interstellar fanatics (as they will seem to their contemporaries) and re-located welfare folk (a source of good, cheap labor), plus a scattering of refugees from the libertarian scenario. It sounds rather scruffy, but who do you think the North American settlers were? That rough, exotic mixture is what starts the whole thing going.

Then, to make their efforts pay off, we need the post office scenario—Earth turned into a market for interstellar goods and services because of government restrictions, prohibitions, and rab unionism. Services outlawed on Earth will be available on far worlds, the trips made painlessly affordable by compound interest piling up during (subjectively) swift voyages. Commerce will be financed with interstellar letters of credit issued by branches of fabulously wealthy interstellar banks. Products will be paid for years in advance by departing star-travelers making small deposits, which will swiftly inflate (via compound interest) over the time-dilated decades. Interstellar goods will be shipped to Earth and bought by wealthy, returning Rip Van Winkles with a need for affordable, off-world, obsolete goods. And after a few centuries, when it all comes to pass, the banks' star-traveling founders may still be alive to enjoy their much deserved dividends.

And that's the way the future works. It's rich, raucous, various and vulgar. It's wonderful and strange and profoundly complex. And if the assumptions are accurate, then it might just happen. Someday. But it's not the way you thought it would be, is it? ■

ABOUT THE AUTHOR

Warren Salomon is an attorney, in private practice in Miami, specializing in business matters. He is also a columnist for Reason *magazine. His SF stories (most notably about Ben Hardy, Temporal Investigator) have appeared in various magazines. This is his first appearance in* Analog.

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a calendar of analog upcoming events

1-4 May
General meeting of the American Physical Society at Baltimore, Md. Info: A.P.S., 335 East 45th Street, New York, NY 10017.

12-14 May
HORRORFEST '89 (Stephen King oriented conference) at Stanley Hotel, Estes Park, Colo. Guests—Paul Dale Anderson, Tyson Blue, Michael Collings, Charles L. Grant, Bryan Moore, and Douglas E. Winter. Registration (limited to 400)—$10. Info: Horrorfest, Box 277652, Riverdale IL 60627. (800) 798-2489, (312) 841-6300.

12-14 May
MISCON 4 (Montana Sf conference) at Quality Inn, Missoula, Mont. Artist Guest of Honor—Dan Reeder, Fan Guest of Honor — Glen Hammer. Registration—$16 until 15 April 1989, $20 at the door ($12/day). Info: Miscon 4, Box 9363, Missoula MT 59807. (406) 549-1435.

16-19 May
EUROCON XIV (European SF conference) at San Marino. Registration—$40. Info: Dr. Adolfo Morganti, Via Cappellini 14, 47037 Rimini, Italia.

26-28 May
V-CON 17 (British Columbia SF conference) at University of British Columbia campus, Vancouver, B.C. Theme: "Humour and Satire in Science Fiction." Guests of Honour —Spider Robinson, Robert Sheckley, and Bob Shaw. Registration—C$18 (US$16) until 31 March, C$24 (US$20) at the door. One day memberships—C$10 Friday or Sunday, C$15 Saturday. Info: V-Con 17, Box 48478, Bentall Centre, Vancouver, B.C., Canada V7X 1A2.

26-29 May
COSTUME CON SEVEN (Costumer's Guild conference) at Desmond-Americana Inn, Albany, N.Y. Registration—$35 until 15 May, $40 at the door, $15 supporting. Info: Costume Con Seven, Box 2323, Empire State Plaza Station, Albany NY 12223.

26-29 May
MEXICON III (UK SF conference) at Albany Hotel, Nottingham, U.K. Registration £15. UK cheques payable to Mexicon III, non-UK checks payable to Greg Pickersgill. Info: Mexicon III, % Greg Pickersgill, 7a Lawrence Road, South Ealing, London W5 4XJ, U.K.

31 August-4 September 1989
NOREASCON III (47th World Science Fiction Convention) at Sheraton-Boston Hotel & Hynes Convention Center, Boston, Mass. Guests of Honor—Andre Norton, Ian & Betty Ballantine; Fan Guest of Honor—The Stranger Club (Boston's first SF club). Registration—$70 (adult), $45 (child) to 15 March 1989; $80 (adult), $50 (child) to 15 July 1989. Supporting—$20 at all times. No advance memberships after 15 July 1989. This is the SF universe's annual get-together. Professionals and readers from all over the world will be in attendance. Talks, panels, films, fancy dress competition, the works. Join now and get to nominate and vote for the Hugo awards and the John W. Campbell Award for Best New Writer. Info: Noreascon ILL, Box 46, MIT Branch, Cambridge MA 02139.

—Anthony Lewis

Items for the Calendar should be sent to the Editorial Offices six months in advance of the event.

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WHEN LIFE HANDS YOU A LEMMING . . .

Thomas A. Easton

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The image boys in executive row weren't too pleased when I drove my antique Escort to work. Within an hour the Vice-President in Charge of Making Grown Men Feel Like Little Boys had me on her carpet, and if she wasn't shaking her finger at me, she might as well have been. My uncle Brian would have called her a motherly old cow.

She looked the part, too, as she said: "You know the company policy, Cal. Machines scare the beasts, they look out of place next to the haybins and hitching posts, and we're selling Roachsters to replace cars. We expect our employees to drive them, *not* automobiles, antique or not."

I nodded. General Bodies was a genetic engineering shop, and the Roachster was its biggest product. I knew the policy.

"You usually do drive a Roachster, Cal. Why didn't you today?"

"Archie ran away," I said. Archie was my Roachster. I had named him because I liked him better than I had ever liked an automobile—even the Escort—though he *was* an ugly thing. He was cheap, safe, and—until now— reliable. And he had personality.

A Roachster was a cross between a lobster and a cockroach. Its cockroach ancestry gave it speed. Its lobster ancestry gave it enough size so a little gene-tinkering had made it grow to about twenty feet long. Bulges in the shell were passenger and luggage compartments once GB cut door and window holes. The controls plugged directly into its nervous system. Its wheels were more bulges; they spun on built-in hubs and were powered by the creature's legs, running on top of them. It ate garbage and hay, which were a lot cheaper than gasoline. And when two of them got too close on the highway, they would stop to stroke each other with their feelers. Collisions were impossible.

"Oh, God," she said. Her censoring mood evaporated. Now she was the worried business executive. "You think it went into the sea, too?"

I shrugged. That was where too many of the things had been going ever since we had put them on the market six years before, though only in the last year or so had the problem gotten bad. We had failed to remove some basic urge from the Roachster's lobster genes, and on dark nights they would chew through their tethers and the walls of their stables, and leave. They had been seen cruising the highways until they caught the scent of the ocean. Then they left the road and rolled cross-country to dive into the foaming brine. None had ever been seen again. And sales were down.

"We need to drop everything else," she said quietly, as if she were thinking aloud, "and find an answer to this. I'm sure the committee will agree." She looked me in the eye and raised her voice. "I'll take it up with them later today. For now, Cal, that's your new assignment. Focus on this, this 'lemming effect.' And solve it." She gave me a big grin, proud of having named the problem, as if that was half the solution. She didn't know that we had been using the same term in the shop for the past six months.

In my office-lab, a few minutes later, I cut up a potato and dropped the chunks down the sink drain. There was an aggressive crunch, a gurgle or two, and a bubbling noise. I told myself that we

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needed to make the pig a little quieter, though the old mechanical models had never been famous for silence.

I opened the cabinet under the sink and peered at the barrel-like body covered with short bristles. Small hooves jutted from top and bottom, the limbs themselves reduced to vestigial stumps. It had no neck, its head arising from the shoulders, the mouth and throat aimed permanently upward to meet the sink's drainpipe, its snout whuffling against the underside of the metal basin. It rested on broad haunches, plugged into a second pipe in the floor of the cabinet, fulfilling its intended function as an intermediate link in the plumbing.

The garbage disposal's odor suggested animal warmth, with only a faint pungency. There was no problem there. But yes, we definitely needed to make it prettier. Until this morning, that had been my job. Now . . . "Sorry, Freddy," I said. "I've got to figure out how to make Archie stay home."

It was too late for Archie, of course. It was also wasted effort. My mind was blank. And as soon as the Directive From On High came down, telling all us lowly technical types to get cracking on the "lemming effect," I did what I always do when I draw a blank.

I took a field trip. I packed up my wife and daughters and headed for the coast of Maine. We drove the Escort. On the way, I noted that there were a lot fewer Roachsters on the road. Civilian models, anyway. There were plenty of police models, cruising with their giant claws at the ready. I had never been surprised that putting Roachsters on the market had cut speeding drastically. Crime was down, too, ever since a Brooklyn cop had used his Roachster to tear through the wall of a third-story apartment and grab a suspected dope dealer. On the other hand, most people now called cops "roaches."

It was an easy trip to justify, since the "lemming effect" definitely involved the coast, and since lobsters equally definitely were a Down East thing. I didn't go to Florida or New York because I don't like unengineered roaches. And besides, I had grown up in Maine, the town I was going to was full of old friends and family. It was summer, we owned a cottage near the shore, and I had high hopes for the fishing. I figured a week or two would vent enough of the Cambridge and General Bodies pressure to let me think clearly again.

And it wasn't a long trip, either. From Cambridge to the Maine border was only an hour. But still, our spirits lifted when the high arch of the Kittery bridge hove into view. As we crossed the line, like every other expatriate Mainer I had ever talked to, we burst into song. Ours was "We're home because we're home because we're . . . "

The landscape wasn't really any different from that of New Hampshire behind us. We could see motels, stores, restaurants, and houses thronging on nearby land, though the Interstate was mercifully clean. On the other hand, the summer traffic was as thick as in the Boston suburbs. But the land felt different. We relaxed, and I said to Betsy, as I did every time we entered Maine, "Someday, honey. Someday we'll chuck it all and move up here for good."

"Amen," was her reply. Sadie, our older girl, had another opinion: "We can't! I wouldn't have any friends! And Jeff . . . " Amy, two years younger,

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said nothing, though I knew that she, too, would hate to leave her school and friends.

Once we had unpacked the car, I let my wife handle the obligatory visits to great aunts and second cousins. She took Sadie with her. Amy preferred fishing, and I took her with me to the town dock.

At the bait shack, I didn't see Old Ben Harms, who usually ran the shack. It was his boy, Young Ben, who stood behind the counter. We had known each other in high school, but our ways had parted at graduation. When I asked him where his dad was, he told me, "Had to go down to Bangor for a treatment. Got cancer, y'know."

I hadn't known, and I said so.

"Ayuh." He had used to smile almost all the time. Now he looked like he didn't know how. He reminded me strongly of his father. I wished we genetic engineers had been able to come up with a real cure for cancer.

Uncomfortable, I said, "I'd like some bait."

"*Mackerel ain't runnin*'," he told me. "Bluefish neither. Ain't seen either of 'em for a year."

"How about flounder?"

He looked over his counter at Amy. She, only eight, smiled up at him. One hand held her fishing rod at attention beside her.

"Might be a few," he said. "Try that float." He pointed to the farthest one in the chain. A two-masted sailboat was tied up to it. "That windjammer dumped a load of garbage this morning." He shook his head, and then he sold us a plastic cup full of mussel meat. I also bought a bag of Potster Chips for Amy to munch on.

I gave the bait to Amy and sent her down the line of floats to try her luck. I stayed on the dock to survey the familiar scene. The waterfront was quiet in its senescence, old paint-peeling buildings as decrepit now as they had been for years, though once they had been a chicken processor, a cannery, a shoe plant, a— the town had been dying for decades, though it managed to show surprising signs of life from time to time. The old boat shop to the left was actually busy, with the girderwork of what seemed to be an addition to the shop under construction. On the other hand, the two men sitting on a bench not far from me seemed far more typical. I knew them, and eventually I found a seat nearby, where I could both see my daughter and watch them work.

They were repairing ancient lobster traps for the tourist trade. I watched as they braced the traps between their legs to remove punky, broken slats and install new ones, carefully weathered but still sound. They were also installing new twine funnels and bait bags. I wondered in what field these traps had been mouldering. Wire traps had replaced wooden ones before I was born.

I knew them both. Clem, the one in faded overalls, had been a farmer the last I heard; I supposed he still was, though the grey bristles on his cheeks made me wonder whether he had sold the farm and retired. Alf, just as bristly, wore a yellow slicker and high rubber boots. He had hung around the dock in that costume every summer, all summer, rain or shine, for as many years as I could remember. I had once heard him say that it was just in case some

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tourist wanted to take a picture of a genyoo-ine Down-Easter.

Clem looked at me when I sat down. "Hiyah, Cal," he said. "Ain't seen you for awhile."

"Been workin' up to Boston." I dropped into the speech rhythms of my childhood without thinking.

Alf laughed. "Turned into an out-a-stater yet?"

I smiled back at him. "Feel like one sometimes."

"Your girl won't catch much." Clem pointed at Amy with his hammer.

"Ayuh," said Alf. "Ain't nuthin' out there a'tall."

I glanced toward the bait shack. "Young Ben said maybe flounder."

"Nah," said Clem. "No mackerel. No blues. No cod. No flounder."

"Nuthin'," said Alf. His cheek bulged as he worked whatever he was chewing out of the way. His lips pursed, and he spat a stream of something brown over the side of the wharf.

"Damn good thing," said Clem. "Damn good thing them genetic engineers invented potsters." I looked for Amy. She had her hook baited and was playing the line over the side of the float. The bag of Potster Chips lay beside her, colorful in the distance. Potsters were a very successful hybrid of lobster and Maine potato.

"Saved the potato farmer, they did," said Alf.

"Saved me, too."

"I heard about that," said Alf.

"I haven't," I said.

"Well." Clem drove a nail into a slat for the trap he was holding between his knees. "Couple years ago. I put in a field of peterkins. Seed company swore they'd grow to six-room size, even in Maine. Then I could slip foundations under 'em and have me a housing development."

I knew about peterkins. They were giant, genetically engineered pumpkins. Once they reached their full growth, they could be hollowed out, dried, treated with sealants and preservatives, and fitted with doors and windows. They had made the first real dent in the world-wide need for low-cost housing. General Bodies, even though it specialized in designer animals, had long envied Burpee for its success.

"But we got an early frost that year. They didn't make much more'n closets."

"Lose your shirt, then?" I asked.

"Nah. Sold 'em to the Porta-Potty folks. But I didn't make much profit, I tell ya. That's why I'm growin' potsters now."

Steamed potsters had a mushier texture but all the flavor of real lobster meat. Several of my local relatives grew them in their home gardens, and when we had arrived from Cambridge, we had been served "lobster" fresh from the garden. I wondered aloud whether anyone bothered to set traps for real lobsters anymore.

"No point," said Alf. "No fish out there. No lobsters. No clams, even."

"Nuthin'," said Clem.

"Unless you're into sports," said Alf. "Too dangerous."

I could see Amy's rod bend even from my distance. She stood up, yanking at whatever had grabbed her bait. I heard Clem gasp, but I didn't turn to ask him why.

In a moment, Amy pulled a small fish onto the float beside her. Alf said, "Pollock."

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"Damn good thing," said Clem.

I turned toward their bench. They didn't look any different, but . . . "What do you mean, dangerous?"

Clem shrugged. "They don't come into the harbor much."

"Unless there's a lot of garbage in the water," put in Alf. He leaned toward the edge of the wharf and spat again.

"Ayuh. That's true. At high tide."

I looked at the water line on a post that now served only as a mooring. Once it had helped to hold up a neighboring pier. The tide wasn't high at the moment, so whatever they were moaning about didn't seem likely to pop out of the water right away. But the tide *was* coming in.

"Dammit!" I said. "What are you two talking about?"

"Wild automobiles," said Alf.

"Ayuh," said Clem. "The worst kind."

"They've turned against us," added Alf.

"Tear traps and drags into paper clips," said Clem.

"Slice nets *all* to pieces."

"Divers too."

" 'N they've pulled a boat or two down."

Amy caught another fish. I thought it might be a small flounder, but I didn't waste time peering. I called her in. The tide was getting too high for my comfort.

"People are staying off the water," said Clem. "That's a fact."

"Except the sport fishermen," said Alf.

Were they pulling my leg? That was a fine old Down-East sport, and though Roachsters had been running off to sea for over a year, I had never heard of anyone catching one. Briefly, I wondered whether the sport fishermen used harpoons, but I didn't ask. Nor did I ask what those sport fishermen did with their oversized trophies. I could just barely imagine the front end of a Roachster hanging over a mantle.

Amy ran toward me, fishing rod and bait cup in one hand, her stringer with its two fish in the other. Her expression was dark. "I wanta keep fishin', Daddy," she cried when she reached the base of the ramp that linked the wharf and the nearest float. "They're biting!"

That's what I was afraid of. I shook my head. "We've got to go, honey. We can come back tomorrow." At low tide, I added to myself.

When we got back to the cottage, Betsy and Sadie were there. It seemed that Aunt Emma, thank goodness, hadn't been home, but the other three had been. Amy bragged about her fish, and I listened to the family news my wife had managed to remember. I didn't tell her about wild Roachsters sinking boats and mangling divers. I kept to myself my vision of Archie rolling out of the sea to grab our younger daughter. I did tell her about Clem and Alf—she had met them years before—and their "antique" lobster traps.

That reminded Amy to look at her sister and say: "And guess what? Daddy got me a whole bag of Potster Chips!"

Sadie ignored the taunt. Betsy gave me a dirty look, as if to say, "Junk food!" I went to the kitchen for a beer.

The next morning, I checked the tide

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table in the paper. The first low tide would be a little before ten. I figured if we got down to the wharf by 9:30, Amy could fish till lunchtime and maybe even catch some fish. A rising tide was always best.

When we arrived, Ben Harms the Elder was there to sell us more bait, and Clem and Alf were already in place. They looked as if they had been on their bench, decrepit lobster traps between their legs, at least since dawn, and perhaps they had. Coastal folk tend to rise early.

Alf started our conversation: "Them genetic engineers don't know everything. Can't even keep a car in its garage." He spat into the harbor.

I didn't believe he had forgotten my profession. Every time a new product hit the market, the local paper called me up. It found me preferable to a university geneticist, for I *was* a local boy, even though I didn't live here anymore.

I watched my daughter as I groped for a riposte. Her rod tip was twitching already, though the tide was slack. She reeled in, and I could see a small crab clinging to her hook. I said, "Lobstermen don't seem much better, getting scared off by an overgrown lobster."

Clem laughed.

I shook my head and added, "My own's out there somewhere."

"Forget it," said Alf. "They only run off when they're ready to molt."

"That shucks the plates," said Clem. As well as the lights and interior and all the rest, I reminded myself. Generally, Roachsters that were growing too tight in their shells—the owner could tell by their increasing sluggishness—went back to the dealer. In the shop, a hormone injection triggered the molt. As soon as the new shell had hardened, the dealer reinstalled the bumpers, lights, controls, doors, windows, and upholstery. Archie had gone through the process three times, each time coming home a little larger. He should have done it at least twice more before we had to trade him in on a trimmer model. Then depending on his condition and the demands of the market, he would be converted into a light truck, put out to stud on the company's ranch, or turned into pet food.

As far as I knew, no one had suspected any link between the runaways and molting. "How do you know?" I asked.

"If it did come in here, you couldn't tell it was yours," said Alf.

"Ayuh," I said. "It's gone. But how do you know about the molting?"

They looked at each other. "Why?"

When I told them about the new assignment that had sent me home, they shrugged. "The old shells wash up on shore. But never on the islands." Clem gestured toward the rounded shadows on the horizon. I got his point. The Roachsters obviously shed their harness soon after entering the water.

Then Alf said, "I know why they're running away."

I looked for Amy on her float. She had another pollock. Then I stared at him. He dressed for the tourists, yes. But he knew the coast, and I supposed he might know lobsters as well.

"Ayuh," he said. "I know lobsters. Roaches, too. Spent a few years down to New York when I was a boy."

Clem laughed. "Worked in a seafood place," he told me. "Health department

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ran him out."

. Alf gestured with his hammer. "Whatever," he said. "Least, I've never been arrested for fakin' antiques." He turned back to me: "Roaches," he said. "They hate the light. Don't surprise me non a'tall to see 'em running away at night."

"But why the ocean?" I asked.

"That's their lobster half." He shrugged, as if to say that that much was obvious. Perhaps it was. I was already getting ideas about how to keep them in their stables. Maybe we could make them less photophobic, even photophilic, and keep them tethered to a nightlight. Certainly, I thought, we could strengthen the symptoms of impending molt and remove their ability to molt on their own at all.

A cry from the farthest float caught my attention. Amy was on her feet, her rod on the float-deck beside her feet. She was pointing toward the mouth of the harbor. I yelled, "What's the matter?"

She waved her arm and shouted back, "What's that?"

I shrugged and yelled, "I'll find out!" "That" was a ship that looked like a miniature aircraft carrier. It had a flat deck with a two-story conning tower to one side. A heavy railing surrounded most of the deck, leaving an unrailed working area in the rear. I knew it was a working area because it was overhung by a stout derrick and coils of rope littered the deck.

"What is it?" I asked Clem and Alf.

"Used to be a ferry," said Clem.

"Till the state put a new one on the run," said Alf.

"Never did scrap the old one, though," said Clem.

Several dark shapes were shifting back and forth in the railed section of the deck. "And those?"

"Sports," said Alf.

"Ayuh," Clem agreed. "Tasty, too. They sell 'em to the cannery." He gestured to one of the decrepit buildings along the harbor's waterfront. Steam was beginning to belch from a metal chimney.

As the converted ferry drew nearer, I saw that the dark shapes were actually roachsters. They were smaller than any on the roads, and they had no wheels, but . . . "Ayuh," said Clem. "Your runaways go wild and start breeding. And they ain't the same."

Of course, I told myself sheepishly. Not sport fishermen, not in the old sense. But fishers for mutants. For sports. Sports with claws, which might well make them dangerous to a small girl fishing by the edge of the sea. I swore that any more fishing we did we would do in fresh water. There were plenty of brooks and lakes around. "But how do you catch them?"

Alf shrugged. "No problem," he said. He pointed toward the boat yard. Immediately, I saw what I had taken for a new addition as . . . "Ayuh," he said. "Don't matter how big the lobsters get along the coast of Maine. We've always known how to build traps."

I hollered to Amy and waved her in. When she reached me, I said, "Want to go see?"

She looked where I was pointing, at the ferry approaching the cannery, and nodded eagerly. We left the wharf and put her fishing gear back in the car. Then we walked down the shore to where we could watch as the ferry slid into a gap in the side of the cannery

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building and its bow railing folded down. Then the stern railing at the edge of the work area began to slide forward on rails, herding the milling Roachsters into the building. I noted that the swellings on their shells, that would normally be carved into windowed compartments, held a lower, more streamlined profile. I wondered how fast they would be on the road.

I found out soon enough. Shots echoed from the cannery building as workers began to process the catch. The catch objected, their bodies slamming against the interior of the building. We could see the walls shaking, and then the door to a loading bay sprang open. A Roachster charged into the open, saw freedom, and accelerated faster than my Escort had ever managed. But a single shot brought it tumbling to a halt.

"Happens all the time." I turned to see Clem. He had followed us. Now, as a crew retrieved the fallen Roachster, he explained a little more. "They taste just like lobster, and that's the way the company packs 'em."

I guessed that just maybe a can that was labeled "Roach Meat" or even "Roachster" would fall rather flat in the supermarket.

"Cost-efficient, too," said Clem. "Least, that's what they told my nephew. He works in there."

"They pay much, for the critters, I mean?"

Clem shrugged. "Dollar a pound."

And one of those wild Roachsters might run half a ton, easy. I could see why the cannery mislabeled its product and the sport fishermen kept quiet. They didn't want competition. But I was beginning to get an idea.

* * *

Over the next week, I did indeed take Amy fishing inland, and we caught a few trout. But I spent considerably more time talking to the sport fishermen and the cannery operators.

One evening toward the end of the week, I asked Betsy, "Do you still want to move to Maine?"

She looked at me as if I was crazy to ask. Perhaps I was. "Of course,dear. But your job's in Cambridge. We have to settle for these 'field trips.' "

"This one's done," I said. When her face fell, I told her about the molting connection. "All we have to do," I said, "is strengthen the pre-molt sluggishness. Maybe even fix them so they refuse to move at all. The dealers would have to fetch them for servicing, but—"

"But why did you ask about moving to Maine?" She had stepped closer to me while I chattered. Her hand was on my arm, and her eyes were anxious.

"Because we can do it. I want to quit." I told her why, and she agreed that it was worth a try.

The next morning, she began looking for a house. Then I called Cambridge, told them how to fix the runaway problem, and said, "I quit."

Then I opened my dealership.

That's right. The sport fishermen bring their catch to me now. I pay twice what the cannery paid, install the necessary controls, glass, upholstery, and other trimmings, and sell them as high-status, high speed, high-price vehicles. I don't touch their tendency to run away at the first opportunity. Sports cars are supposed to be high-spirited.

The cannery is still working, but it gets the sports only when they have grown too big for the road. ■

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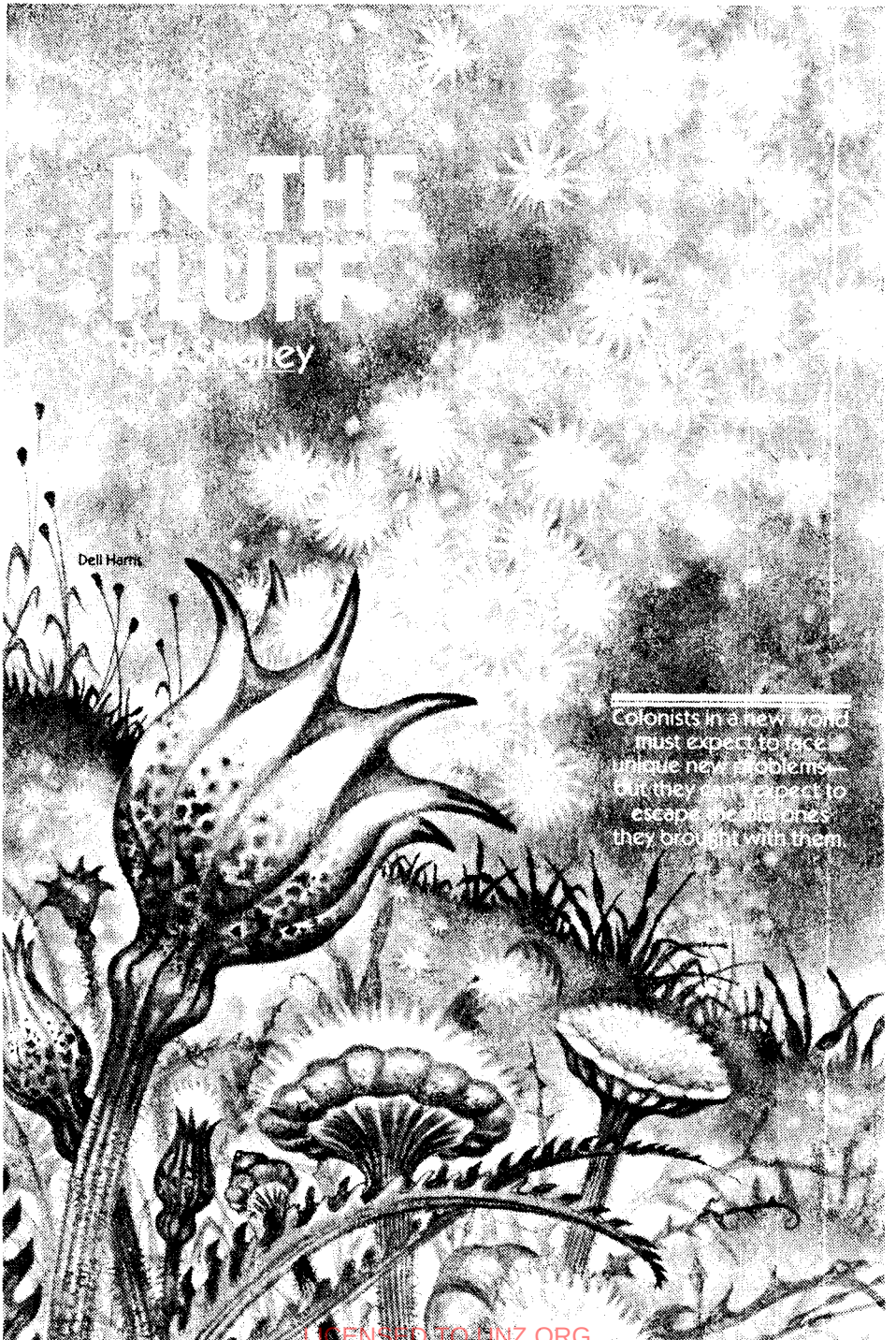
IN THE FLUFF

by Chris Bailey



Colonists in a new world must expect to face unique new problems, but they can't expect to escape the ones they brought with them.

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I remember our first autumn on Devon, when the colony was so raw that we hadn't completely dismantled the ship that brought us and nearly a quarter of us were still living in tents, building homes as fast as we could. The excitement, the wonder, of being the first humans on a virgin world sustained us through the months of frantic sunrise-to-sunset labor. Yes, I remember. That puts me in a distinct minority now. It's not that fatalities ran over 50 percent that first autumn. As desperate as that season was, it wasn't as bad as memory would sometimes have it—especially in autumn when fluff is due again. Less than a fifth of us fell victim to fluff that first time, when we didn't know what to expect, and some of *them* survived. We were lucky. The fluff was only moderate that year, and we were able to crowd together in the finished buildings and in the remaining sections of our ship, *Eternal Hope*, until the fluff ended. But a lot of children have been born since then, and we had a second wave of colonists four years later, so those of us who remember the first autumn are a minority. It's not like we're a huge colony now, though. We still have fewer than 17,000 people after seventeen years.

Another autumn had started. Any day, fluff would begin and we would seal ourselves into our homes for the five to six weeks that the annual plague lasts. Even now, we sometimes lose people to fluff. Equipment breaks down. Emergencies come up. We prepare as thoroughly as we can, working like hell to protect our families and livestock.

I was on the front porch, finishing my annual overhaul of the filter system for the house. Every bit of air has to be scrubbed and filtered to keep fluff out of house and barn. In the days just before fluff, the frantic work reminds me of the first year, and makes me feel older than my age. But then, I've got the weeks of fluff to recuperate. I looked off to the forest while I rested, staring blankly toward the native trees that border my farm. The morning report on the comnet had warned that the pods were swollen to record sizes. This year's fluff would be especially bad. And the pods might start rupturing any moment.

A muted buzz from the comlink inside caught my ear.

"It's for you, Mort," Annie called.

"Coming." I was glad to extend my break.

"You finish the filter system?" Annie asked when I got inside.

I nodded. "It's just a question of whether or not it will hold all season." Even new systems are hard-taxed by fluff, and new systems are hard to get, even if you can afford them, and I can't. I sat at the terminal. Harry Masters was on the line and he looked terribly shaken.

"What's wrong, Harry?" I asked.

"My oldest girl, Sonya. She's been kidnapped."

"Kidnapped?" I couldn't keep the surprise out of my voice.

"That's what I said. We've got a note. It's them Tuckers. They've taken Sonya for one of their boys."

"Kidnapped?" I repeated, not thinking how stupid I had to sound. "Jeez, Harry, are you sure?" Crime is rare on Devon. We never had anything as serious as kidnapping.

"Damn it, Cavendish, aren't you lis-

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tening?'' Harry shouted. ''They took her by force and God knows what they're doing with her. You're the constable. You've got to get her back.''

Constable. An honorary job. Usually. Sometimes I have to arbitrate between feuding neighbors before things get out of hand. I listen to complaints, make suggestions. About the only real qualification I have for the job is size. I'm big and strong.

''I'll be right over, Harry. Twenty minutes. I've already got my floater sealed in the shed for fluff.''

Harry looked as if he was deflating physically. ''Hurry, Mort. Please. We've got to get her back before it's too late.''

I nodded and blanked the screen, wondering what the hell I *could* do. I didn't doubt what Harry told me. He wouldn't make up a story like that. So, kidnapping was a first, but it did sound like something the Tucker clan might work themselves up to. Folks don't care much for them, and old man Tucker had a mess of grandkids getting on toward marrying age. That had to be what it was all about.

When I got up, Annie was staring at me.

''Sonya Masters is just a year older than Debbie,'' she said. Debbie is our oldest girl—fourteen years old.

''I've got to go to the Masters place,'' I said. ''I don't know what I can do this close to fluff, but I've got to talk to Harry and his family at least. You'd better run the tests on the pumping system. I think it's ready, but we need to be sure. Run all the faucets in the house and barn full blast for ten minutes. Make sure the pump doesn't overheat or lock up. It shouldn't.''

Annie nodded. ''If it's true about Sonya, you have to do more than talk. We can't let the Tuckers get away with stealing children, no matter what else we've let them get away with. They might come after Debbie next.''

It was as close as Annie ever came to criticizing. I took a deep breath and met her stare. She knew what she was saying, knew what it meant. Annie's a lot smaller than me, but she doesn't act it. She's strong for her size and can keep going long after I'm ready to collapse. We joke about ''pioneer women'' sometimes, but we'd be lost without them.

''There's no way I can get to their place and back before fluff,'' I said, though Annie had to know it. ''Even if I could figure a way to take on the whole Tucker clan single-handed. And there's no way to get enough people out to do it, not in the fluff.'' Actually, I figured that this *was* enough to get people out, but it would take a day or two, and fluff would be blowing before we could leave. Fluff complicated matters no end. I suspected that the Tuckers were counting on that.

''You're the only law we have. It's either you or vigilantes, even if they wait till after fluff. You know as well as I do that they'll turn out for this. Do you want a crowd of panicky people trying to operate in the fluff? Some of them will die, and they'll kill all the Tuckers once they get started, maybe Sonya Masters, too. Especially if they're scared silly about being out in fluff.''

I didn't argue. People had been ready to wipe out the Tuckers before, over ordinary stealing. I had to scream my head off a couple of times to get people to see that nobody had any solid proof

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that Tuckers were behind the thefts, that no one had seen Tuckers near the places where things turned up missing. Hell, I knew as well as anyone that it *was* Tuckers, but there was no proof.

But Annie was right, I had to do something now. "Can you put together five days' food real fast?" I asked. "I'll take a tank of water and a couple of air bottles."

"And guns and ammo," Annie said. "Just leave me one shotgun. Take the rest, and use them if you have to."

There wasn't much room left in the floater by the time I got everything —including my isolation suit—loaded. The van looked like a rolling flea market. And far from being at Harry's place in twenty minutes, I was just easing the floater out of its shed a half hour after the call. Harry was pacing back and forth in front of his gate when I drove up. He was carrying a shotgun and looked as though he was itching for someone to shoot.

"You took your damn time," he said when I got down from my van.

"I had to stock up for the trip to the Tuckers's. I want that note you got about your daughter."

"Come on. It's in the house."

"Tell me what you know about the kidnapping. How did it happen?"

"Sonya and Teddy went over to the Smithsons's with eggs. They were gone longer than they needed to be, but I didn't think much of it. Sonya's kind of sweet on Craig Smithson's oldest boy. Coming back, the Tuckers happened by, then turned around and came back. They grabbed Sonya, hauled her into that rickety floater of theirs. A couple of minutes later, they gave Teddy the note and started him off toward home with a kick. The kick missed his rump and connected with the tail end of his spine. He's hurt pretty bad. Doc Prundel's in with him now."

"I'd better ask Teddy a few questions." I bit back a sigh. I didn't know much about playing cop, and it was the wrong time to have to learn.

"He can't tell you more than I can," Harry said. "The boy's just eleven, and he's hurting right now. You've got to get Sonya back before those Tuckers mess with her. You have to."

"I'll try. How many Tuckers were in their truck?"

"Teddy said four. Old man Estes signed the note *himself*." We reached the porch and Harry said, "Hang on, I'll get the note." While I was waiting, Craig Smithson's truck pulled around from the back of the Masters house. His floater's about twice the size of mine.

"How long ago did they grab Sonya?" I asked Harry when he came back out and handed me the note.

"More than two hours. Teddy took a while getting home, hurt so bad."

The note wasn't much, just a couple of scribbled lines saying they needed the girl to be wife to one of Estes's grandsons.

"If they drive straight through, there's no way I can catch them," I said, handing the note back to Harry. "And they will drive straight through, to get home before fluff. They'll be behind their walls, the whole damn tribe. They've got a castle out there in the hills, Harry. I've seen it. There's not a damn thing one man can do."

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"I'm going along and so's Craig. We already got his rig loaded."

That was no surprise. The two families were as close as any two families could be.

"I've my van loaded, too," I said. This time I didn't hold back the sigh. "All we can do is try, Harry. But even with three of us, it doesn't look good. There must be eight or nine Tucker men." From about sixteen to over seventy years old.

"Three of us can do it," Harry said. "We've got a hundred pounds of dynamite in Craig's truck. We can use that if we have to."

"Dynamite? What the hell are you planning to do? They've got your daughter, remember? You going to blow her up, too?"

"I'm not stupid. But we can poke holes in their walls, do enough damage so's they have to come out. Then we got the advantage."

"They're the ones with the hostage," I reminded him.

Most of us on Devon live fairly close together. We're not bunched up in towns—after Earth, everybody wants a little more elbow room than that—but our farms are all fairly close together. The center of our little world has Colony House, a market green, and a couple of warehouses that the co-op uses. That's the hub. A circle with a twelve-mile radius centered on Colony House would include 70 percent of us. There's a smaller concentration thirty miles south of that circle in an area of iron and aluminum ores we can get at, and another small cluster fifty miles west of the mines, along the sea coast. Those three areas account for all but maybe two hundred of our people. Those last two hundred are really scattered, families that live off by themselves in the "wilderness." The Tucker clan is the most extreme. Back after that first autumn, they carted all of their goods more than a hundred miles north of the main settlement, claiming a narrow valley in the foothills just south of a mountain range as high and craggy as the Rockies on Earth. The Tuckers are rarely seen in any of the settlements.

Any other time of year, I might have welcomed an excuse for an excursion north to the hills, or anywhere else, but not *this* kind of excursion. The greens and yellows of spring and summer are a delight. The country smells can be wonderful. They're strange, alien, and they work a special magic on most people—a resonance none of us really understand and few question. When we first landed, Devon seemed like Eden.

That was before we first experienced fluff. Now, we can't wait until Earth plants totally displace the native vegetation. Fluff convinced almost everyone that we can't always share Devon with its native plants. And there's no chance we'll give up and go somewhere else. We couldn't if we wanted to.

Our ground effect vehicles can cover a lot of kinds of terrain, but there are limits. Steep hills or steep riverbanks, thick forest, even some of the stiff brushy grasses of Devon can force detours. Covering the hundred miles to the Tucker homestead would mean driving over 150 miles, some of it very slowly, since both floaters were heavily loaded. The floaters we brought along on *Eternal Hope* are old and being held together

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mostly by wishful thinking. The few new ones we've managed to make (the hold-up is the amount of metal we can mine and refine) are better, but it'll be a long time before the molecular factories can produce enough to go around. We had some problems with them, way back, and they haven't recovered fully.

I led the way north. I've taken regular turns with our exploratory teams. We go out and take samples, and eyeball as much of the world as we can get to by floater and light plane. We're always on the lookout for places where we can get minerals and ores at the surface. Because of the problems with our little self-replicating factory molecules, we can't do much deep mining yet—and imports are impossible.

I had plenty of time to worry about what we might do when we reached Tucker Valley. None of my wild rescue ideas gave me much confidence. They all smacked of phony Tri-vid heroics.

Going north, the land rises gently toward the foothills. The first stretch is mostly native grass. That's where we made our best time. When we stopped for a break an hour before sunset, we had covered almost half the distance. It would take twice as long to drive the rest. I shut down my engines and blowers and worked my way back to the airlock at the rear of the cabin. I had the front doors sealed against fluff.

Harry climbed out of the other truck and yelled, "Why are you stopping?"

"We need a rest," I said. "Start up again later tonight. We're going to hit fluff at dawn. Our fans have been breaking pods for the last hour. Come sunrise, we're going to have thick fluff for sure."

"All the more reason to push on now," Harry said.

"Don't be a fool." I was too tired for diplomacy. "I know you're worried, but you won't help Sonya if you can't think straight." Craig was slower getting out of his truck. He's a couple of years younger than Harry or me, tall and thin, perpetually on edge. Harry's built bulky, but he's shorter than me.

"He's right, Harry," Craig said. "There's no way to reach Tucker Valley before fluff, so we might as well rest. We'll need clear heads to deal with Tuckers *and* fluff." Craig's father had been one of the casualties of the first autumn—before we learned how insidious the fluff was. The senior Smithson had inhaled a lungful of spores. They had taken hold in his respiratory system, suffocating him from inside before our medics realized what was happening.

I had parked by a creek—an instinct developed from my years of traveling with the exploring parties. Harry squatted and looked into the clear water. There were already a few small clumps of fluff floating in it.

"After all these years, it may sound strange, but I've never been out in fluff," Harry said, "not since the first day of the first fluff."

"Nobody goes out if they can avoid it," Craig said.

"You brought isolation suits, didn't you?" I asked.

"For us and Sonya," Craig said. "Food for a week. You?"

"Five or six days' worth."

"I don't want a Tucker grandkid," Harry said. "Sonya's mother says we've only got two or three sure days to get her back to stop that for sure." He stood

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and turned to face us. "If we have to blow up the whole Tucker compound to get Sonya out, we'll do it."

I shook my head. "Killing's not the way to solve anything, not if there's any other way. You start setting off explosives, you're as likely to kill Sonya as anyone else. Are you willing to chance that?"

"If we'd stopped the Tuckers before, this wouldn't have happened." Harry stared at me. "You were the one always griping that we couldn't prove anything when everybody knew damn well it was Tuckers doing the stealing. I hope you remember that if things go bad. I sure will."

"Listen," Craig said. "We're supposed to be resting, so let's rest. None of this yakking gets us anywhere."

"You're right," I said, "but one thing before we sack out. We'll have to use the radios in the fluff. Since we're going to stay close together, unhook your RT antenna and use test-power. That should let us talk up to a hundred yards or so and keep the Tuckers from listening in tomorrow."

"Will we be able to talk through fluff on test?" Craig asked.

"If we stay close," I said. "If test isn't enough, though, we can slide the gain up gradually until we can just hear each other. We sure don't want Tuckers listening to us, though." I climbed back up on the rear deck of my van. I needed a nap and nobody sleeps outside when fluff is due. "Three hours. Then we can eat and head out again. Get as far as we can before sunrise. Rest again for a bit then. Finish the drive tomorrow morning."

I guess none of us slept much. I cranked my seat flat and stared at the ceiling most of the time. I was looking for a way to get Sonya out without fireworks. I knew I would have to try to talk the Tuckers into releasing her, but I didn't have a lever yet.

Tuckers. They had been a thorn festering in the colony's side since the first winter. People did everything but cheer when old man Tucker hauled his clan off into the wilderness, and absence hadn't led to greater fondness. They came back whenever they needed anything they couldn't make or grow for themselves. Sometimes they traded. But if they couldn't make a good trade, they were apt to help themselves. But no one had ever caught them red-handed.

And I was always the one keeping our hotheads from going after the Tuckers without proof. The hotheads were quick to say that I was afraid of the Tuckers and maybe even my own shadow. But they were never sure enough of that to say it to my face—which kept me from feeling too bad about the slurs. And most folks knew better.

I remember Earth. I remember what it was like living in a housing project that had twice as many people as all of Devon. Senseless killings. Police who had to be callous and brutal simply to live through a shift. Good people who found that the only way to survive was to turn criminal. "It's the only work I can find." Stealing, prostitution, drug selling, hired muscle.

That's why I grabbed the chance to ship out as soon as I turned sixteen and could make the decision for myself. Of the 6,500 colonists who embarked on *Eternal Hope,* half were teenagers like me, sixteen to nineteen, ready to gamble

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at any odds for a chance to escape an Earth where people couldn't die fast enough to make room for the next generation. The rest of the passengers were married couples with younger children. Craig Smithson was barely young enough to make the trip with his parents. Harry Masters was a teenaged volunteer like me. We were vital, that's what we were told. With the trip needing a dozen years, they had to have people our age to avoid a big generation gap in the middle.

Devon was our paradise, ten, almost eleven months a year. I didn't want to see the violence that's so common on Earth get a foothold. Almost any price was a bargain—but not kidnapping.

I finally dozed for a bit. Harry woke me by banging on the side of the van. It was dark and I fumbled around for a soft light. I felt more dragged out than before—too little sleep can be worse than none. I got out and soaked my head in the creek to try to clear my mind. There was more fluff in the water but not enough to be dangerous. I was certain, though, that morning would bring the first of the year's fluff blizzards.

Every plant native to Devon uses the same method of propagation—windborne, light, feathery spores or seeds, something like dandelions and cottonwoods on Earth. The mortality rate for the spores and seeds seems quite phenomenal. Our botanists argue over the numbers (it gives them something to do while they're housebound during fluff), but they say that a tree might put out ten million seeds for every one that sprouts, and that only one out of ten thousand that sprouts might survive long enough to put out its own fluff. The grasses, bushes, *everything* uses the same method, and they all drop their loads at roughly the same time. The effects are awesome —and awful. Fluff blizzards can swirl for days or weeks, cloying, saturating the air for yards above ground level. The native animals are adapted to it. They'd have to be. Some hibernate through it. More feast on fluff. All have respiratory systems that filter it out, and nictitating membranes keep their eyes clear. It works for them, but we don't have their evolutionary advantages.

Some of the spores and seeds are almost microscopic individually while others are larger. But inhaled in the quantities that can be present, even the almost-invisible ones can choke you, or germinate in your throat or lungs. They can even start to grow in ears, any place confined and warm. In the thick of fluff, people can drown on spores as fast as on water. That's why we normally seal ourselves and our livestock in for the weeks of fluff.

Harry and Craig were eating when I finished splashing in the creek. They watched me over their food, not speaking. While I went back to my floater for my meal, I wondered at the way they were looking at me, wondered what they had talked about in Smithson's truck. I knew the look they were giving me, the "we're a group and you're an outsider" look. On Earth, and in the crowded dormitories of *Eternal Hope*, that was a defense. It didn't bother me then. It did now.

I'm getting paranoid, I thought. I got

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sandwiches from one of the boxes Annie had packed and ate standing up.

Annie. We met on the ship. The girls were in different dorms, separated from the boys by all of the family units. That led to a lot of traffic. I didn't get close to many of the guys in my own dorm compartment, but I met as many girls as I could. Until Annie and I found each other. We were married the day we went into orbit around Devon.

"We should reach Dever's Notch by dawn," I said as we got ready to leave. "We'll need another break then, if not before." I wanted to establish a routine of me making the decisions. That might help keep Harry and Craig in line when we faced the Tuckers. "You know, in a way the fluff may make our job easier. The Tuckers probably won't be out looking for us. They'll be sealed up in their compound. We can look the place over, maybe get damn near to the front door before they even know we're around." I stared at Harry. "It may give us a real chance to get Sonya out safely."

Harry's nod seemed like a reluctant concession.

During the night drive, I was finally able to concentrate on planning for the confrontation. Old man Estes would make all the decisions and do all the talking for his family. He ruled it like an absolute monarch. He had held his family together from the start, isolating his daughters-in-law from their own families. His three sons had all been in their early twenties when we reached Devon, married on the ship and producing kids before we landed. Babies were a priority right from the start, for everyone. Each baby adds to the long-term security of a new colony. Now, the Tuckers were looking for mates for Estes's grandsons and granddaughters. A couple had found them through acceptable, traditional means, among the other isolated families and in the smaller settlements. Not many people in the main settlement would have anything to do with Tuckers. Which led to the kidnapping of Sonya Masters, and—if she wasn't rescued and the Tuckers put in order—it would lead to more kidnappings of the same sort.

We couldn't allow that.

We stopped a couple of times to cool our blower motors and got out to stretch our legs and clear our heads once, about one in the morning. The drive had been uneventful, cramped, boring. We were all tired, losing concentration.

"You know," I said while we were all standing between the floaters, "we may have less trouble rescuing Sonya than we've been thinking."

"What the hell do you mean?" Harry demanded.

"Just this." I hesitated, wondering if it would sound as logical when I told it as it had when I thought of it. "The single most important thing in life to old Estes Tucker is his family. He's like the rest of us in that, maybe just more extreme. Hell, that's why they grabbed your daughter in the first place. I'm thinking, hoping maybe, that they did it on the spur of the moment and didn't think it out in advance."

"What difference does that make?" Craig asked. Curious.

"Maybe all the difference," I said. "If they planned to do something like this in advance, they'd have thought it

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through. Estes would have figured out what our response would be. Something like this. He's not stupid. But if they were cruising, looking for something else, and one of the boys just happened to spot Sonya, said he liked her, and they grabbed her right then on impulse, Estes didn't have time to see how dangerous it was for his whole family. And the way you told me it happened, Harry, it does sound like it was just something they did because they saw the chance."

"You mean, just because he's had time to think about it, he'll give her back without any fuss?" Harry asked. His skepticism showed.

"Could be," I said, hoping my uncertainty didn't show in my voice. "If it's put to him right. Sensible talk, not people waving guns and dynamite in his face."

"You sure your name's not Tucker?" Harry asked. I almost laughed. The intent to insult was so obvious and the insult so pathetic.

"I don't see any point to violence if it can be avoided. This isn't Earth. We don't want to make the same mistakes. That's why we came here, to get away from that crap." That's why most of us made the trip, anyway. "The point is, if Estes sees that the only alternative is seeing his family wiped out, he may listen to reason and give Sonya back. Old Estes may be a real son of a bitch, but he dotes on his family." I stared at Harry but he didn't have anything to say.

"So?" Craig prompted.

"So we talk first. We let Estes know right off that he's got no choice, that the whole colony stands ready to bury his clan if we have to. That *is* what it comes down to. No way we can let them get away with this."

"Go on," Craig said when I stopped. "How do we work it?"

"When we get close to Tucker Valley, I'll park and give you two time to drive around to the draw at the north end of their valley. Then I'll go in the south way and drive up to the front gate and get on the radio to tell Estes that I'm coming in. Full power on the radios. When you hear me finish, you get on the channel and say something like, 'We're in position up here.' Each of you say something like that, fifteen, twenty seconds apart. Jimmy the power level so you sound like you're in different places. There's no way the Tuckers will know how many of us there are, not with fluff. And I won't give them time to go scouting. Faced with the choice of giving up Sonya or losing his family, Estes will let her go." I had talked myself into believing it by that time. "When Sonya and I get clear of their compound, I'll give you the OK." I held up my hand when I paused so neither of them would jump on the silence.

"So you know the call's legitimate, I'll say, 'We're buttoned up.' Anything else, you figure maybe they've got a gun to my head or something."

" 'We're buttoned up,' " Craig repeated.

"I'll push my buggy for all it's worth getting away and I won't stop until we're south of Dever's Notch. Then we can rendezvous for the trip home."

"Where do we meet?" Craig asked.

The exact spot wasn't important. I made a quick choice. "Four miles due south of Dever's Notch. If I have to duck anybody following, I'll give you

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directions over the radio—just distance and direction from the original rendezvous without mentioning it. OK?"

"Should work," Craig said.

"I'll get Sonya's isolation suit for you," her father said.

Morning brought the expected fluff blizzard. Pods heated by the sun reached critical interior pressures and popped, loosing the first flood. It started slow and built quickly as the sun got higher and set off more pops. We stopped again after dawn, side by side. No one got out this time.

"We have to take a couple of hours to rest, at least," I said over the radio. "I'm about to fall asleep." In test mode, with the RT antenna disconnected, I could barely hear Craig's reply.

"I know what you mean. I'm so bushed I can hardly keep *my* eyes open, and Harry and I have been taking turns driving and resting."

"The Tuckers have likely got their valley damn near stripped of native vegetation, so we've got to give fluff time to blow in from outside, anyway," I said.

"How much longer you figure for the drive there?" Craig asked.

"Not much more than an hour."

"So, if we sit for, say, three hours, we can still reach Tucker Valley well before noon, right?"

"Right," I agreed.

I set the alarm on my dash clock, laid the seat back, and fell asleep almost instantly. When the alarm went off, I felt better than before. Not great, but better. The fluff outside was blizzard thick. I could see almost-clear sky if I looked up, but the fluff was heavy on the flat. I even had trouble seeing the other floater right next to my own. Radio reception was so bad I nearly boosted my power out of test mode.

"We'll have to rely on instruments the rest of the way," I said. "I've got a position feed coming in from the satellite. It'll be slow going, but there aren't many obstacles. We can get around them."

"I've got the feed, too," Craig said. "We'll follow you in."

I don't suppose that there's much difference between driving in a fluff blizzard and driving in snow. I can't be sure because I've never driven in a snowstorm. Here on Devon, we rarely have snow south of the mountains, and never enough to cause problems. I could barely pick out the main features of the landscape in front of me, and then only if I kept my speed below ten miles per hour. The intakes for the front blowers keep the area right in front of the windshield partially clear and the cab is high enough to let me look over the worst of the fluff. A sunny day. Any major obstacles would show as dark spots in the white, and between the satellite feed and the floater's promixity warning system, I wouldn't run into or off of anything dangerous. There's another reason for keeping the speed way down in fluff, though. At high power, the spores and seeds would clog the intake filters and cause the blower motors to overheat, maybe even seize up. That can stop a truck in a hurry.

I couldn't see the other floater behind me, but we talked over the radio occasionally. Once we got into the foot-

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hills, vision depended on the lie of the valleys and the wind direction. At times, the air was clear enough to see thirty or forty yards. At other times it was, "Where's the end of the floater?"

I stopped a mile and a half south and east of the entrance to Tucker Valley shortly after eleven. "I'll wait here and give you an hour to get around to the other end," I said. "Then, it's power up on the radios and I tell Estes I'm coming in."

"Better make it ninety minutes," Craig said. "I've got a rear blower that's overheating bad. I'd better get in and clear the filter before the face-off, in case we need to make time getting away afterward."

"OK, ninety minutes." I checked the clock and the temperature gauges for my blowers. They were doing OK, for fluff.

I'm not good at sitting around waiting. I checked the loads on my weapons, nosed through the survival gear and everything else, reminding myself what I had and where it was. The air tanks were a precaution in case I got into fluff too thick for the cabin's filters to handle. I could shut down the intakes and make it for twelve hours, hopefully long enough to last until sunset when the intensity of fluff normally decreases. I've been in fluff that thick.

I got into my isolation suit then — strong, flexible, clear plastic with good seals, helmet of the same material with breathing filters. Five minutes before the ninety were up, I started the engines and blowers. In part, my plan rested on an assumption that—even though they kept themselves isolated —the Tuckers would monitor the general-traffic frequency, especially right then, to see what effect their actions would have. I connected my RT antenna and started toward the entrance to Tucker Valley.

I got on the radio precisely at the ninety-minute mark. "Mort Cavendish, calling Estes Tucker." I waited a moment, then repeated the call, adding, "We need to talk, Estes."

A long time seemed to pass before I heard, "What is it?"

"That you, Estes?"

"It's me. What do you want?"

"You know what I want. I'm right at the mouth of your valley. I'm coming in. We have to talk."

"We got nothing to talk about."

"Yes we do, Estes."

Before he could answer, Craig was on with, "We're in position over here."

"We're set up here," Harry said almost immediately. Harry sounded twice as far away as Craig.

"What's that all about?" Estes demanded.

"You know what it's about, Estes," I said. "Sonya Masters. I'm coming in." I started forward again, not waiting for a reply.

Estes growled. "I don't see no sense to it, but since you come this far, you might as well come the rest of the way."

I turned into the valley and headed for the fenced-in section in the center. Fluff was blowing down the length of the valley from the north. There was a teardrop-shaped area on the lee side of the house that was only bothered with light, swirling fluff. The rest of the valley was in white-out—as far as I could tell. The outer gate was closed but not latched. I nosed my van gently against the gate and pushed it open, then drove right up to the front door of the oldest

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section of the Tucker warren. The foyer would be sealed as an airlock. That was standard.

My hands were sweating.

I saw a face at a window. I shut down the floater and put the helmet to Sonya's isolation suit in a bag I could seal. Going the few steps from house to floater, she wouldn't need more, especially with the partial clearing on the front side of the house. I didn't want to waste any more time than absolutely necessary getting out once I talked Estes into releasing her. If. A *big* IF.

The buildings of the Tucker compound were all linked and made of native rock and mortar. All occupied buildings have to be substantial here, because of fluff and storm winds that can drive it into the slightest flaws. Even barns and chicken coops have to be built like fortresses.

I ran the keycode to lock the floater when I got out. I wanted to be sure it was there when I came back out. When I stepped into the house's foyer, I closed the outside door and cycled the pumps that forced the air in the foyer through filters to extract any fluff that came in with me.

Estes, his three sons, and a scattering of grandsons were waiting in the living room. There was no way I could tell if all the grandsons were there. I didn't know how many there were. There were no women in the room, and no Sonya.

"Estes." I nodded his way. He nodded back but didn't speak. "You've gone too far this time, Estes. You'd better bring the Masters girl out here now so we can leave before it's too late. Tools, livestock, that's different. Grabbing the girl was too much. It comes down to this. Either the girl and I leave here in the next ten minutes or those people out there are going to destroy your whole family. Nobody will put up with kidnapping. And don't bother trying to deny it. Her brother recognized you and the truck. Your boys hurt him pretty bad, like to broke his back. And that note. There are records with your signature."

Estes took his time answering. "Folks want to mess with us, we can defend ourselves."

"No you can't, not against the whole colony, and I don't think you're stupid enough to try, not for what it'll cost you. There are men out there now with enough dynamite and guns to do the job. I know how much you care for your family. Other folks care just as much for their kin. They figure if they let you get away with it once, nobody's kids are safe, so they're determined not to let you get away with it, no matter what. Sonya's father is one of them out there and he's het up worst of all. Either you send his daughter out now, unhurt, or he'll light the first fuse."

Estes and I stared at each other and I started having doubts about the intelligence of walking into his parlor the way I did. Maybe Estes wasn't stupid, but maybe he *was* crazy enough to take on the whole world.

"Lionel, go get the girl," Estes said without taking his eyes off me. "Bring her here." When his son left, Estes said, "You so sure they'll blow us all up, what you doing in here?"

"Like I said, I know how much you care for your family. And I know you've got to be pretty smart, the way you've made a go of it out here by yourselves.

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I'm counting on that. I'd rather see that *nobody* gets hurt. Nobody. We don't have enough people on Devon that we can afford to kill each other. We don't want this to become another Earth. Fluff's enough to worry about."

"My grandsons need wives," Estes said.

"It can't be this way, Estes. You've spent all these years showing folks you didn't care a whit for them, their property or opinions. What do you expect? You'll have to fix that, you and your kin. Maybe it'll take a lot of time, but it's the only way."

"Don't know as I've got that much time," Estes said. He had to be well past seventy, one of the oldest people on Devon.

"Sure, it'll be rough, but if you want to see your family continue, you've got to do it." Well, there was one other possibility, but I wasn't going to mention it. I figured the chances of the Tuckers starting to inbreed was high enough without me suggesting it.

"Maybe," Estes said. We stared at each other some more. Estes's hair wasn't much grayer than mine, for all that he was thirty years older than me. He was thin, and his hands trembled a little—from age or illness, not from fear; I had no doubt about that. His eyes were dark and brooding, deep-set. There was no missing the power he wielded in his own domain. *Pater-familias*. None of the others said a word. They just waited for orders. Whatever Estes said to do, they'd do it, not from fear, but from the sense of duty the old man had instilled in them. None of them looked like they had suffered from the isolation they lived in. The house was as clean and orderly as any in the colony. Isolation had not meant deprivation.

Lionel came back leading Sonya by the wrist. I recognized her. Our colony is small enough that you get to know everyone in the main settlement by sight by the time they hit their teen years. She had dark hair and eyes, was slender like most of us, and hadn't yet been weathered by the life we lead—maybe not a great beauty, but not ugly either. Ordinary. In a way, that made what had happened even more unsettling. If the Tuckers would pick her to grab, they might pick anyone.

Lionel looked to his father for instructions. Sonya pulled free and came to me. She stood half behind me, holding on. I gave her the plastic bag.

"Put the helmet on, Sonya. We've got to go out in fluff to my van. Just a few steps. You OK?"

"I guess. They didn't hurt me."

"Estes, when we get clear, I'll radio the others and get them headed back home. You'd all better stay out of sight until they're gone. Some of the folks are so teed-off they might not be able to hold back if they see a target. And I don't want *anyone* at all getting hurt." Estes nodded, slowly, shallowly.

"OK, Sonya. We're leaving now." I looked around at the sons and grandsons of Estes Tucker. I didn't think any of them would move without the old man's orders, but I was getting more nervous by the second. "Right out the front door." Sonya led the way. I backed toward the door after her, itching for the comfort of my pistol in my hand. I had to concentrate to keep from drawing it. I had hoped the rescue would be

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this easy, but now I was worried that it was *too* easy, that Estes had given in too quickly.

"Round the back of the floater," I said when we got outside. I kept watching the house until I got up to my airlock, ran the keycode, and opened the door. "We'll squeeze through together so we can get out of here faster." Sonya didn't answer. She just made room in the airlock. It's tight with two people.

"Keep your eyes peeled," I said when I got to the driver's seat and started the engines and blowers. "Yell if you see any of them come outside." We were moving while I talked. I was edgier than ever. It would take them a moment or two to get into isolation suits—unless Estes had other grandsons waiting in one of the other rooms already suited up.

"I can't see anything through this fluff," Sonya said when we emerged from the partially clear space close to the house.

"Use the infrared night-goggles hanging on the side there. You'll be able to see better with them."

I waited until we were 300 yards past the gate before I keyed the radio and said, "We're buttoned up." The radio clicked twice in acknowledgement. No comment. That surprised me. I figured Harry would be yelling, wanting to know how Sonya was.

"You sure you're OK?" I asked, glancing in the mirror.

"I'm sure," Sonya said.

"They didn't hurt you or anything?"

"They didn't rape me, if that's what you mean."

That's what I mean, I thought. Age has made me more timid about things like that. When I was younger, I would have come right out and asked.

"They were going to have a wedding ceremony first, tomorrow or the next day. Some of the family wasn't home. They've set up another place, farther north, deeper in the hills."

That was news to me, not good news perhaps. They were planning to move farther off, maybe to be out of reach of angry fathers. I shook my head. Maybe I hadn't done anything but buy a little time and save one girl. If the Tuckers got off where we couldn't find them . . .

"You know where this new place is?" I asked.

"No, just north."

My next question didn't get out. We were a mile from the Tucker homestead, but I heard the explosions that came in a quick series—three, maybe four heavy blasts—even over the din of the blowers on my van.

"Damn fools!" I shouted. I didn't have any doubt what the explosions meant. "They had to start trouble, anyway."

"What was that?" Sonya asked, her voice shaking.

"Your father and Smithson. They had dynamite. They went ahead and attacked the Tuckers." I grabbed my microphone.

"Harry! Craig! What the hell do you think you're doing?" There was no answer. I took a quick look at my temperature gauges—hot, but not too hot—then eased more power to the blowers, giving us a little extra speed. We raced through the exit from Tucker Valley and turned left toward Dever's Notch.

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"You're not just going to leave them, are you?" Sonya asked.

"They should be coming out of the next valley east any minute. We're heading to the rendezvous we agreed on. *My* job is to get you home safely. If they've got themselves in too deep, that's their problem. And if they killed anyone, they've got no call on anybody's help."

"My *father?*"

"I'm sorry, Sonya." Sorry for her, certainly not for her father or Craig Smithson. And I was too mad to pretend otherwise. "I didn't want anyone to get hurt, not even Tuckers. If your father and Smithson killed anybody after you were released, it's premeditated murder, plain and simple."

I tried to ignore the tears on Sonya's cheeks. We both had our helmets off. She had stripped hers off as soon as we were sealed in the van. I had worked mine off while we raced away from the Tuckers's, before the explosions. I tried calling the others again—still no answer. When we got to the track leading out of the next valley, I stopped for a moment. With the blowers off and the twin engines idling, the cab of the floater was almost quiet. I didn't hear any more explosions, or any shooting. I looked at Sonya again.

"I am sorry," I said. "Maybe they'll get away. They've got a good chance. And if they're lucky, they'll get out without killing anyone. But if they did kill Tuckers, I can't say what will happen later." It seemed unlikely that the colony would impose meaningful penalties for killing Tuckers. A lot of folks would be more inclined to vote the killers a medal. What was eating at me was that killing would have been introduced to Devon. In seventeen years, we had never had a murder. I thought about Earth and the daily killings in the projects.

We were approaching Dever's Notch, the last sloping draw out of the foothills, when I heard Smithson on the radio. "Mayday! Mayday! You there, Mort?"

"I'm here." I stopped the floater and waited.

'We've come under fire. Harry's hurt bad and my truck's out of action. I can't get the blowers going and we're getting a little fluff inside. We're near the southern end of the valley next to the Tuckers's, about a half mile north of where we separated before. They were waiting for us. We're not taking any fire right this minute, but they're still out there."

I hesitated before I said, "Just what the hell did you expect? You couldn't leave well enough alone, could you?"

"We had to make sure they wouldn't try anything like that again."

"Crap." I looked at Sonya sitting next to me. She stared at me, waiting to hear what I would do. I was wondering the same thing. Back to the radio. "If you killed any Tuckers, Craig, I'll invoke the Charter's criminal laws on both of you." It had never been done on Devon, but I could call for a trial. Our "governor" would preside, and a jury of twelve would decide, with a three-quarters majority needed to convict.

"Get real, Cavendish," Smithson said.

"I am." It wouldn't do much good, but I would have to make the stand—and

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when that failed, I would resign as constable.

"Are you going to pick us up or not? Harry needs a doctor. He's in rough shape."

"You are going back, aren't you?" Sonya asked. "Maybe what they did was wrong, but they did it for me." *Family*. Sometimes, our preoccupation with family can be a royal pain.

"Your father was ready to blow up the Tucker place with you in it," I said quietly. "I think they planned to kill as many Tuckers as they could no matter what. That's out and out murder. There's no way to paint it up nice."

"My father's hurt. He may be dying." Sonya stared at me and I couldn't turn away from her eyes.

And we could get killed going back, I thought. Then I sighed. "OK, we go back." I started the floater moving again.

"Cavendish, are you coming?" Smithson demanded over the radio.

I picked up my microphone. "That's what I'm trying to decide." I waited a full minute before I said anything else. "I'll do what I can." There was a sour feeling in my gut—not fear—not yet—just anger and frustration.

"Put your helmet back on, Sonya, and hand me mine. We won't have time to fiddle with the airlock when we get there." I worked my headpiece on without stopping. We were a half hour from the other floater. "I'll back as close to Smithson's truck as I can, line up the airlocks if possible. We'll have to work fast to get in and out before the Tuckers disable this van, too."

I didn't hear the first shots. My van's blowers are exceptionally noisy, worse every year. But I saw a hole appear in the side of one of the blower housings, and then I heard the cabin being punctured.

"You OK?" I asked while I backed toward Craig's truck.

"I'm OK," Sonya said. She was crouched low, with a lot of the supplies to give her some protection.

"Let's go, Craig," I said into the radio. "Pronto."

Sonya moved back to the airlock. "I don't see any movement." Her voice was pitched higher than usual.

"Damn." I moved to the rear of the van. "You know how to run one of these buggies?" Sonya nodded. "Get up front. I'll see what's up. Be ready to haul out of here once I get everybody in." She nodded again and squeezed past me.

There were bullet holes all over the cabin of the other truck. I didn't bother cycling either airlock when I crossed to the other truck. Harry and Craig were both sprawled out, showing large bloody patches. Craig was dead. Harry was still breathing. Barely. I didn't even consider bringing Smithson's body along. Getting the rest of us out alive would be challenge enough. I had trouble moving Harry. As soon as we were in my van, with bullets hitting both vehicles, I yelled at Sonya.

"Move it! Head us back the way we came."

The floater yawed as Sonya raced through a too-tight turn and sped off. She pushed the van too hard for fluff, but I didn't say anything right away. Getting clear of the guns was more ur-

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gent than possible mechanical trouble later.

We had shipped a lot of fluff making the transfer. I propped open the inner airlock door and started the pumps to filter the cabin air. Then I dug out the first aid kit and started on Harry, not knowing if I could save him.

It's not chance that I carry a well-stocked medical kit. We operate hours from expert help. A good medical kit and a solid knowledge of emergency medical treatment are essential. I got the bleeding stopped, or minimized, then started an IV saline solution with a dose of blood-producing compcells. Only then did I tell Sonya to slow down a bit to ease the strain on the blower motors.

"How bad is he?" she asked.

"It's going to be close, but he's got a chance now. The blood bugs work fast." *If* he didn't have anything vital torn up inside, he might make it, but I couldn't tell about internal damage.

A few minutes later, Sonya slowed the van even more and said, "We're starting to run hot."

"Park it facing the hills and shut everything off," I said. "We'll have to chance five minutes." No real choice. It was either give the blowers a chance to cool down or have them seize up, maybe in a hurry. I checked Harry's vital signs. They were all very shaky.

"How are you at first aid?" I asked Sonya.

"Pretty good. Daddy made us all learn young."

"Good. Let's switch places. I've done all I can here. Your father just needs someone to watch him. I'll drive. I've been babying this van along since before you were born."

I slipped on night goggles. With the infrared sensors, I might spot pursuers long before I could see them in visible light through the fluff.

"He looks so pale," Sonya said.

"He lost a lot of blood. Watch the IV close. I've got it wide open. Blood bugs use it fast. Can you hang a new bag when that one's empty?"

"I know how. Is the air in here clear enough to take this helmet off?"

"Plug the holes first. Use wads of gauze and tape them in place."

I started us moving as soon as we shed our helmets. The temperatures on the blowers were still too high, but better. I kept close watch. It looked as if we would have to park to clear the filters before we got home, but I didn't want to risk it until I knew if we had Tuckers following. I kept the floater aimed a couple of degrees west of south, toward the river crossing, the last barrier before I could aim directly at the settlement. The temperature gauges crept toward the red lines. If one blower seized up, the strain would push the other four blowers past the limit. I'd have to stop for the half hour or more it would take to clear the filter and cool the blower motor. If we were being followed, we wouldn't have a half hour—and we were being followed.

"Cavendish!" The scream on the radio, an hour after I took over the driving, startled me.

"He's either damn close or he's got the most powerful transmitter around," I whispered before I keyed my microphone.

"I hear you, Estes," I said.

"You son of a bitch, you set us up."

"No way, Estes. I told you, I didn't

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want anybody getting hurt. If I had known what the others planned, I'd have warned you. Hell, I'd never have entered your house if I knew what those crazies were up to."

"You can't con me again, you bastard. You set us up, then gave the signal."

"The only signal I gave was to let them know they could leave, that the girl and I were out safe. The rest was their own idea."

"I'm coming for you, Cavendish. You killed half my family. I'm going to kill you and the others."

"There were only two of them, the girl's father and their neighbor. One's already dead and the other's close to it. They've paid their price."

"But you haven't. And we need the girl back, now more than ever."

"What I said before still goes, Estes. Nobody will let you get away with kidnapping girls. You said you could defend yourselves against everybody. You couldn't even protect yourselves from two hotheads. If you want to save the rest of your kin, you better listen and do some straight thinking."

"Later, Cavendish, after I take care of business."

"If you don't think now, you won't have any later." I'm a lousy liar, so it's good that the best line was the truth. "Look, the only chance you've got is to gather up the rest of your people and everything you can carry. Trek as far as you can get before the colony sends an army to finish the job. You get a thousand miles away and maybe folks will have time to cool down."

"There'll be time," Estes said. "First things first."

I turned left, due east.

"What're you doing?" Sonya asked.

"Estes knows the route to the settlement better than I do. He could catch us before we get anywhere close. Our only chance is to lose him, so we have to head somewhere else. I'm going to have to clear the filters on the blowers before we get another ten miles. I've got to buy us some time."

"Why not radio for help?"

"We'd still have to stop to clear the blowers. By the time anyone could reach us from the settlement, it would be too late. The Tuckers are too close. And I still want to avoid any more bloodshed, if that's possible. Estes has a case against your father, even against me, as far as he knows. Sure, I didn't know what your father and Smithson were up to, but I wouldn't believe me either if I was Estes." Yeah, Estes had a case, even after the kidnapping. I couldn't hope to guess how he was feeling if he had just lost a big part of his family—whether it was as much as half like he claimed, or not—knowing how he felt about them.

"Somebody may overhear all this talk on the radio, anyway," I said. Maybe. With fluff, it was iffy.

"What if we get lost?" Sonya asked. "Daddy still needs a doctor."

"We can't get lost. We've got the satellite to track our position and there are other places to cross the river. It'll take longer, but we won't get back at all unless we get away from the Tuckers."

I had to keep our speed down. The temperatures were close to the red line, too close. The fluff was getting thicker in the afternoon heat. There would be

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no relief from heat or fluff until dark. Close to sunset, I shut down the engines and blowers. We couldn't go any farther without losing them.

Harry was still out, but breathing easier. His pulse and blood pressure were a little improved, but he needed to have the bullets dug out of him before he would be out of danger.

"I'm going outside," I told Sonya. "If I don't hear any trace of Estes, I'll clear the blowers as soon as they cool down enough for me to get at the filters. You stay with your father."

I took a rifle when I got out, and I had my night-goggles on under my helmet. I stood on the rear deck listening for several minutes. Heavy fluff mutes sounds, but floaters are noisy. I figured I would hear one a long way off. Nothing. Finally, I hopped down and walked thirty yards back the way we had come. Still nothing. If Estes didn't stumble over us by chance, we ought to have the time we needed. I opened the safety grates over all five blower intakes. Heat rose from the wells like ovens. It would be a while before they cooled enough to clear the filters without burning myself.

I told Sonya that we seemed to be clear and sat on the rear deck to wait. If the Tuckers did approach, I'd hear them a lot sooner outside.

Fluff. After dark came and the air cooled, the heavier bits would settle out. If the wind died completely, a *lot* of fluff would settle. Fluff and moisture combine in the cooler night air, making the particles too heavy to float, leaving a white blanket on the ground that looks almost like snow. Morning would bring new pod eruptions, some of today's fluff would still be in the air, and some of what settled during the night would be picked up again by the drier air of daylight. The amount of fluff in the air builds through the first two-thirds of the season. Then the daily additions decrease rapidly once most of the plants have fired their salvos, and less of the old fluff remains airborne every day to the end of the season. A very tiny percentage of the fluff germinates. The rest feeds animals and enriches the ground for those that do survive. Where we plant Terran vegetation, it out-competes the native varieties quickly, which is lucky for us—but we can only spread our plants so fast.

An hour after I parked the van, I had finished clearing both rear filters and started on the three under the front deck. Sonya came out to cool off.

"Daddy's running more of a fever now," she said.

"I think that's normal," I said—more to keep her from worrying too much than because I believed it. "Soon as I finish here, we'll eat. There's plenty inside. If you're really hungry, you can start now. I should have asked before."

"I'll wait. The Tuckers did feed me." She leaned against the edge of the deck. I went back to work.

"Why'd you come to rescue me?" she asked a couple of minutes later. Something about the way she said it made me look her way. She was staring at me.

"You didn't think we'd let the Tuckers keep you, did you?"

"Oh, I knew Daddy and Mister Smithson would come. But why *you?* You got no cause to risk yourself for

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me." She seemed very cool about the entire affair, cooler than I felt about it.

"It's my job. Constable. And, more than that, I've got a daughter who's just a year younger than you."

"You weren't rescuing her, you were rescuing me."

I started to say that by rescuing her I was making all the girls in the colony safer, but it suddenly struck me that there was something even more basic to it. "I think that's what civilization is all about, people doing things because it's the right thing to do, even when something else is better, or safer, personally. When people forget things like that, civilization falls apart. Back on Earth, I saw people beaten to death by punks who figured they were the meanest SOBs alive, and other folks stood around and watched, or hurried to get away, afraid to help, afraid to say anything. Scenes like that—that's why a lot of us left Earth. We figured life should be better." It sounded awkward to me and I couldn't tell if Sonya understood what I was trying to say. She tilted her head to the side and continued to stare.

"We must have lost the Tuckers," I said as I pulled the last filter. "They'd have been on top of us by now otherwise."

"Then we can go home?"

"We can go home. We'll eat and drive toward the next river crossing to the east—say four hours there, seven or eight from the river home. We get close, I'll call ahead to alert Doc Prundel about your father. I don't want to give Estes a signal to home in on while he can still catch us."

"How much longer will you need on that filter?"

"Almost done. You'd better get inside with your father. He might wake up and there should be someone with him if he does. Once we get moving, I want you to get some sleep. I'll need to sleep myself later. You'll have to drive then. Maybe after we cross the river."

By midnight I was starting to relax a little. The river was close. It wasn't completely logical, but I got it stuck in my head that we would be safe once we crossed the river. Actually, the Tuckers might follow beyond that. We would still be hours from help, far enough for Estes to get his revenge and start his family back toward the hills before help could come. And they might not even worry much about getting away. If Estes was bent on revenge, they might chase us all the way home. *If* they picked up our trail again.

Sonya was sleeping. She hadn't even wakened the two times I stopped to check on her father and rest the blowers. Harry was still unconscious, but his vital signs all seemed a little stronger. The fourth bag of saline solution was going into him, the last one I had in the floater. I hoped it would be enough. He was still seven or eight hours from real medical help.

If the explosion had come a heartbeat later, it would have been under the van instead of just in front. It still nearly flipped us over, kicking up the front end like a rearing stallion. I barely managed to shove the blowers to maximum to try to cushion our drop. They're not made for that kind of abuse. That's why we can't go merrily speeding off cliffs or

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steep riverbanks to catch ourselves on cushions of air. We came down hard. I jerked the yoke left. Sonya woke with a scream that completely drowned my swearing.

"I'm smarter than your worst nightmare, Cavendish," came over the radio. "Thought you'd pulled a fast one, huh? You're mine now." Two more explosions, one a long way behind us, one where we might have been if I had jerked right instead of left.

"Sonya, get ready to grab the controls," I said. I had to grab the first idea that popped into my head to have any chance. "I'm going to jump out the side." There was no time to worry about letting in fluff. "Keep going for a half mile, then stop and shut everything off. Unless you see another floater up there. If you do, head the other way. Get down by the water and out of the van and wait. I'll try to get to Estes. If I don't get back to you in thirty minutes, you're on your own. Get on the radio and scream for help."

I didn't see the Tucker floater, not even with the night-goggles. They couldn't have beaten us to the crossing by much. Sonya and I lost ninety minutes while I cleared the filters, but the Tuckers must have gone on for most of that before they could be sure we had changed course. Their floater would still be warm enough to show a clear infrared signature if it was near. Nothing.

"Either their truck's off behind us or it's hid," I said. I opened the door at my side. I had to put my shoulder to it and give a hard shove because it was taped shut against fluff. I jumped to the ground, rolling with my rifle held close. I saw Sonya shift to the driver's seat before the door swung shut. The van hurried on without swerving.

I lay flat in several inches of settled fluff. More swirled around me, choking thick. As long as I stayed prone, I would be difficult to spot, even if Estes and his brood had night-goggles like my own.

The sounds of the engines faded, then died when Sonya turned them off—not so far away that I couldn't see a heat signature. I listened to silence and looked around cautiously. I did a little more thinking, too. I had no way to know how many Tuckers I might be facing. I can shoot well enough, but there was little chance that I could out last a passel of Tuckers. Good shooting is common on Devon. It has to be. The local critters aren't tame.

I had to spot them first. I hoped they would follow the van on foot. They would know it was there, close. Likely, they would be in a hurry to get to it before I could get down and return the ambush. But I didn't see anyone.

My hopes of nobody getting hurt were dead. We were clearly in a kill-or-be-killed situation. Silently, I cursed Harry and Craig.

Time crawled. I didn't move anything but my head. Fluff settled on top of me, but not enough to shield the heat my body put out. It felt like hours before I noticed a hint of slow movement to my right. A figure came out of the fluff, someone walking crouched over, about to pass me at an angle, following the road Sonya took with the van. He was a good seventy-five yards away, too far to identify. One person. If there were any others around, they were either too far off to see by infrared, laying in the

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fluff, or behind me. That last thought brought a nasty itch to the nape of my neck.

One at a time, I told myself. I wanted to look back, but I forced myself to concentrate on the figure I could see. I raised my rifle and aimed. The barrel trembled even though I had my elbows planted firmly. I got the slowly-moving figure lined up in my sights and started to squeeze the trigger—then slacked off.

I can't do it, I thought. The Tuckers had already been hit too hard for what they did. How could I kill another of them? The figure moved on, farther away. I couldn't see an alternative. Sweat beaded out on my forehead.

I have to do it. I lined up the rifle again.

I did it.

The single shot sounded as loud as the earlier explosions, a violation of the night. The figure spun and fell. I rolled rapidly to my left, anxious to get away from where I had been. I waited for return fire or any sound of hurried movement. The muzzle blast would have been a beacon.

Nothing. More minutes dragged by. I rolled farther to the side, then crawled, bruising my knees and forearms, raising a cloud of fluff as I scuttled along. Sooner or later, I had to find out who I shot. I *had* to know, no matter how dangerous it was. There might be a lot of Tuckers waiting for me to approach the one I shot. But shooting someone would haunt me on its own. Walking away—running, crawling—without even looking would make it worse.

It took me ten minutes to crawl there. Estes Tucker himself. The old man, the patriarch. His eyes were open. He gurgled softly with each breath, still alive. I got up on my knees and leaned over him.

"I tried to warn you," I said—not whispering, but not loud either. "I didn't want any of this to happen."

His eyes moved a little, tracking toward the side. He looked at me. His eyes seemed to focus slowly, then fade. He didn't speak. There was a hole that seemed much too large in his chest. He seemed rather—I don't know, pathetic maybe without family around him.

"I didn't know what they were going to do," I whispered. "Maybe I should have, but I didn't." I looked for any hint of understanding in his eyes, something to ease the guilt I was feeling. He watched me for a moment longer, then his eyes slid closed. He made a strangled rattling noise deep in his throat and he was dead. I remained kneeling over him for a moment longer, then I stood up. The danger didn't seem to matter right then.

"You Tuckers," I shouted. "Estes is dead. Go home. Take the advice I gave him before. Move away, haul everything you can. Get lost for a few years. Give people a chance to forget."

I couldn't tell if anyone was there. Before, it had seemed to be a given that there would be several Tuckers. They never went anywhere alone. But as the silence lengthened, I had doubts. No one had returned my fire. No one had rushed to the old man's aid. No one shot at me now. That didn't sound like Tuckers. I turned through a full circle. I didn't see anyone, didn't hear anything but my own suddenly-heavy breathing. I finally had to conclude that Estes had

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come after us alone, the patriarch doing what he could for his family.

I started walking east after the floater—slowly, feeling as old as old Estes. Maybe I took one hundred paces before I shouted again.

"Sonya, it's me, Mort Cavendish. It's all over."

There was nothing but the sound of my voice, and imaginary echoes after it faded. I kept walking. After another fifty or sixty paces, I called out the same message. A moment later, the floater started up and lights came on. Though I couldn't see it clearly, I knew it was my van. The sound was right and it was coming from the right direction, even if Sonya hadn't driven as far as I told her to. I kept my rifle ready and didn't relax until I was up on the rear deck and could see that Sonya and her father were the only ones inside.

I went in through the airlock, left the inner door open and let the pumps work at clearing the fluff out from before.

"Take a left," I said. "There are two large boulders with huge arrows painted on them. The slope to the river crossing is between them. Get us across and head southwest. Home."

Home and family. We were going home. Craig Smithson and Estes Tucker weren't. I wondered how many other Tuckers were dead—in their home. Home and family. And killing. The sins of Earth.

I looked down at Harry Masters. His eyes were open and moving, much as Estes's had. Harry was awake finally. His mouth opened and closed but no sound came out. I had an urge to kick him. If he hadn't already been stove up so bad, I think I would have.

"I hope you're satisfied," I said. Because his daughter was in the van, I bit back on calling him a bloodthirsty bastard. "Because of you, I just had to kill a better man than you'll ever be." I didn't realize it until after I said it, but it was true. I remembered Harry's taunt: *"Are you sure your name's not Tucker?"*

There was nothing else to say. I turned my back on Harry and went up to the front of the van. Home was still a long way off. ■

●Every man has a right to risk his own life in order to preserve it. Has it ever been said that a man who throws himself out of the window to escape from a fire is guilty of suicide?

Rousseau

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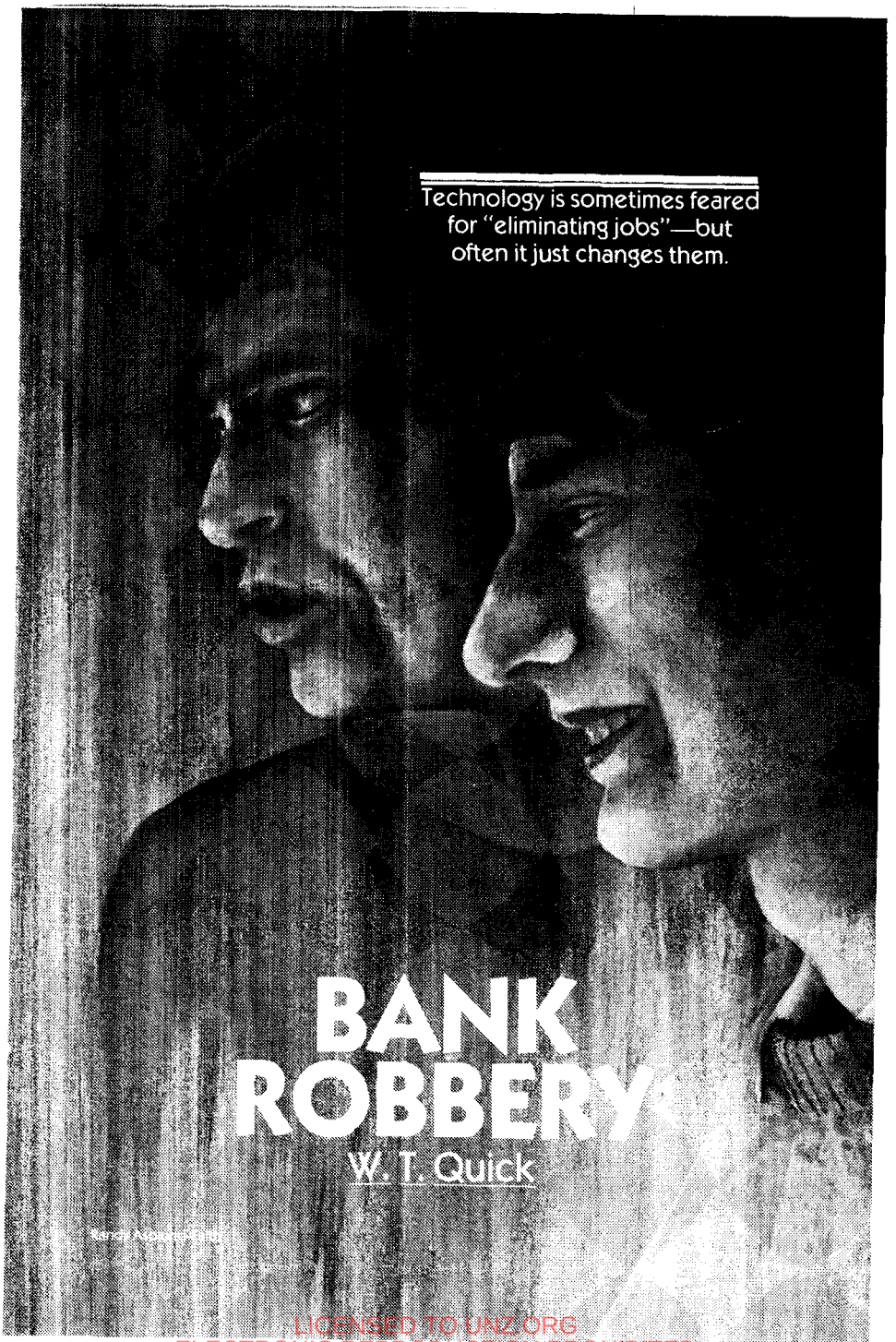

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They'd taken everything.

He rose from his Tandy 9000, a 256 bit machine with one terabyte of ram and a 22 kay infinite interface, and stared blindly around his small apartment. Everything was quiet. Everything as he'd left it, neat and dusted and untouched. Empty.

Except someone had stolen his life.

Who do you call when someone steals your life?

He started with the police.

"Your full name, please?"

The policeman was young, built like a fullback, brisk and thorough. There was a small silver button on his lapel, and George assumed he was recording everything.

"George Stanley," George said.

"Occupation?"

"Editor. Listen, what's this got to do with—why aren't you looking for clues? *Something*—" He felt a black kind of hysteria rising in his skull, a tornado that hummed and crackled and threatened to sweep him away.

"Mr. Stanley." The cop's voice was calm, assured. "This is routine. Just data for our bank." He paused, a bit of compassion coming into his dark eyes. "We have to ask these questions."

The editor in him surfaced, poked its head around. We? There was only one cop here. Was there such a thing as an investigatorial we? And beneath his silent question, the hysteria kept on bubbling, like a pot of black tar.

George felt the cop's eyes on him, and suddenly had one of those moments when he understood exactly what was in another man's mind. The cop saw a man of studious appearance, somewhere between forty and fifty, with a receding hairline and hair left long, not from any statement, but instead an absentminded unconcern for appearance. Five ten and wiry, but with an overlay of soft, unexercised flesh. Brown eyes that absorbed, rather than pierced. A man who lived alone and liked it that way, who worked in his own ivory tower. Now faced with the shattering intrusion of the cop's world, of what the cop thought of as the real world. The cop saw an object of pity. George didn't know if he could stand that. He spoke quickly.

"Yes, of course. I understand. Go on, what do you want to know?" Get this inquisition over, get busy, go find my life. I want my life back.

"Could you describe the missing items?"

George swallowed, forced himself to think. *Think*. Make this young man *understand*. "It's my databank. All my work, my search programs, my references." (*My life*). "It's hypertexted, you know." He said this with a shy kind of pride.

The cop perked up. "Really? How large?"

"Two hundred gee. Give or take."

"Good lord. What did you say you do?"

"I'm an editor."

"That's right. What, exactly, does that mean?"

What, exactly, *did* it mean? George swallowed. Editing was something he did, not thought about. How to make this man understand? He licked his lips, inhaled, and began to try.

"Do you remember books? Magazines?"

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A puzzled look crossed the cop's wide features. "Uh, like paper? When I was a kid . . . " He brightened. "Sure. My ma used to read them. Magazines. Even books. Hard covers, right? Made out of cardboard or something."

"That's it."

"That's what you do? Read old books?" He seemed honestly curious.

"No. Well, in a way." How to put it? "You read, don't you?"

"Well, sure. Of course. I have to. I'm a professional. I subscribe to Law Enforcement Net, and BestSell, and, uh . . . a couple of others."

Like PornLine, I bet, George thought. "OK. And when you want to read something, how do you do it?"

More puzzlement. "Like anybody else. I scan the listings, and if something looks good, I download it to my Tablet. Then I read it. If I want to keep it, I etch out a minichip."

"And how do you pick what you want to read?"

"Well, I have current law news tagged. That automatically downloads. I can never keep up, though. There's so much."

"How about BestSell?"

"Like anybody else. I get the monthly selection, and I scan the rest to see what looks interesting."

"Sure," George said. "Like anybody else. Who do you think picks the books on the BestSell Net?"

Pause. "I guess I never thought about it."

George smiled. "Editors do."

The explanation was enough. It satisfied the policeman, who wandered over to George's machine and began to examine his BubbleBox memory file. He bent over the housing and took some equipment from the bag he'd brought with him.

George had got into it right out of college, almost accidentally. The big databanks and nets were small then, only a fraction of what they were today, but growing. Already there were problems. So much information was flooding the nets that it was almost an insurmountable task to retrieve data in any orderly fashion. Searching among databases was nearly impossible. Within the smaller databanks there were indexing systems which made things easier, but the formal databanks included only a fraction of the total data on the lines.

The revolution had come with user bulletin boards, sysop systems, and the sudden opening of computer nets to the general public. Anybody could put literally *anything* onto a general net.

It was one of the greatest advances ever made in information production and dissemination, and it was chaos.

This was what he faced when he plugged his first high-power modem into A-Net and began to fish among the oceans of data. His first searches had been strictly personal, research for a novel he was writing. The novel had gotten written, eventually, but as he delved further into the limitless breadth of the various databanks and the uncollated input from individual users, he slowly came to a conclusion. There had to be a better way. There was, and it was being developed even as he struggled. It was called hypertext.

A man named Theodor Nelson invented the concept, and spent years developing the software to implement it.

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It was quite simple; picture millions of little cards, each with a separate bit of data on it. Then connect each of the cards to the other with a string, so that paths existed from one piece of related information to another. Finally, raise the whole thing into the air, so that a great tree of data resulted. If you pulled on one "leaf," all the other leaves responded as well. Starting with but a single fact, you could trace associated items as far as the tree went. All with a few strokes on your keyboard.

It was magic.

It took forever to implement.

George started hypertexting his own database almost as soon as he created it. He borrowed concepts from Nelson and added a few of his own. Within months, each piece of research in his files could be related to any other piece almost instantly.

He wrote his novel. After several tries, it was accepted by a major publishing house, and George began to work with his editor. Slowly, a great light began to dawn.

It happened after a particularly long and rancorous disagreement between the editor and himself over changes the editor wanted him to make. George didn't want to make the changes, but since the editor issued the paychecks, he finally gave in. Grudgingly. He found himself wishing he could avoid the whole thing and somehow publish the book himself.

Why not?

That was the beginning. Why the hell not?

As it turned out, the reason was that he couldn't figure out how to get paid. So he finished the changes, made others, and eventually the book saw print. By that time, George had seen the future.

There would come a time when anybody could publish anything. There would be a way to get paid for it. And there wouldn't be any need for editors.

Or would there?

George did some deep thinking. What he came up with was very close to the way things turned out. He envisioned the nets flooded with writing, good, bad and indifferent. The consumer lost, washed away in an ever-increasing flood. That same drowning consumer screaming for help—an American article of faith was there was *always* help—and getting it. From an editor.

An editor who waded through the datapools, picking and choosing, to make his own recommendations. And selling those recommendations—selling his judgment. His editorial judgment. This is good, read it. Buy it.

He started a small service specializing in technical papers. Gradually, as the datapools grew, he returned to his true love, science fiction. And always, every day, his own data bank, carefully hypertexted, grew. After twenty years, he guessed there was no other bank like it in the world. It was his. And it was gone.

He looked up from the gray domain of his contemplation and said, "You have to find it. You have to."

The cop looked up from his machines. "I doubt it," he said.

"Let me explain," the cop said. "I probably shouldn't tell you this, but I want you to have a fair shake. Do you know how many data thefts there are each year in the United States?"

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George shrugged. What did this have to do with—but he thought he knew. Bad, bad news.

"About five million. And rising," the cop told him.

George could fill in the blanks. "Like burglary used to be. So prevalent the police just took reports and filed them. If stolen goods showed up in other cases, then something might be done. But unless the burglary involved a movie star or a million dollar haul, it was just file and forget. Right?" His voice was dull.

The cop stared at him silently. Then he nodded. "Yeah. That's about it. I don't suppose this, uh, database of yours is very valuable? I mean, details for a machine that turns water into gold, or some such?"

George shook his head. "Valuable? Only to me, I guess." *Only to me . . .*

The cop sighed. "Let me wrap it. They wiped your storage, and, of course, you weren't backed up."

Miserable, George nodded.

"The bank was copied before the intruder crashed it, so it *was* theft. Can you think of anybody who could use your bank? Is there something distinctive about it, that if it shows up somewhere else, we could spot it?"

"It was the database for my search programs," George said.

"What does that mean?"

"My search is an AI program fueled by data from my base. I'm online almost all the time, sifting through the thousands of new publications every day. No human could scan it all, of course. But when the search program comes across something that looks promising, it checks against my database. My base includes all the judgments I've made previously, the reasons for them, the results, everything. In a way, my database is me."

Is *me*.

He wanted to vomit. There was no way he could replace it. Now it was gone. His whole life, gone. Some of this must have shown on his face, because the young cop reached out and touched his arm gently.

"Listen," the cop said. "We'll do what we can, but like I said, it won't be much." He paused, thought a moment, and spoke again. "There's something else you can do."

George looked up. "What?"

The cop reached into his pocket, pulled out a tattered leather wallet, and rummaged inside. Finally he came up with a greasy, half-torn calling card. "Here," he said.

"What's this?"

"A name. This guy specializes in data thefts. Name's Berg. A cool customer. Nickname's The Iceberg. He does security and retrieval. Works on spec sometimes. Maybe he can help."

George stared at the card, turned it over.

The cop slapped him lightly on his shoulder. "Give Berg a try. And . . . good luck."

"Yes," George said. "Thank you."

"My name's Jack Berg," the little man said. George held the door open as he walked in. At first glance, Berg wasn't a hopeful sight. He was short and scrawny, with a sallow, fox-like face, and gray eyes that didn't quite match. His grin was the most fetching thing about him. It lent a buccaneerish

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quality to his features, not as reassuring as it might have been. Berg flipped the grin like a piece of identification, then strutted into the room, wearing arrogance like a cloak. George stared at him dubiously.

"So you're the Stanley Steamer," Berg said.

George blinked. "You've heard of me?"

Berg shrugged. "Mind if I sit?"

George motioned uncertainly toward his sofa. Berg took a seat as if settling his butt down on a throne. "Yeah, I've heard of you. Been a subscriber almost ten years now."

George blinked again. "You?"

"Why? You think computer jocks are illiterate or something?"

"Well, I, uh . . . "

"Forget it," Berg said. "Just jerking you a little." He scanned the small apartment. "I figured you to live better than this."

It was an insulting thing to say, but somehow it didn't sound that way. George said, "Editors don't make all that much money." A thought struck him. "I mean, I don't know how much you charge, I've got a little put away, but . . . "

Berg leaned back on the sofa and clasped his hands behind his head, comfortable as a cat. "We can discuss it. You said you had a problem. Want to tell me about it?"

It had been two days since the burglary. George had spent the time vaguely dreaming of ways to recover his databank, but nothing had come. The man on the sofa was his only hope.

George told him what had happened.

Berg reminded him even more of a fox as he listened. His big nose seemed almost to quiver. His gray eyes grew bright and hallucinatory. He seemed to soak up George's words like an alert, intelligent sponge.

"Yeah, OK," he said finally. "I got it. Sounds like a standard smash and grab to me."

George stared at him. "Smash and what?"

"Grab. You know. A fast in and out. I bet they weren't inside more than five minutes. Maybe less."

Despite himself, George was fascinated. He'd always had a magpie's attraction for the odd fact, the bizarre byte of data. "You seem to know a lot about it."

Berg shrugged. "You know the old saying. It takes one to know one. I wasn't always on this side of the fence."

George stared at him with awful fascination. "You . . . you were a data thief?"

Berg grinned. His face seemed more sinister than ever. "The laws weren't as tough then. Besides, it means maybe I can help you. I know places the cops don't."

George was lost. "Places? What places?"

"You ever hear of the Denver Deep?"

George shook his head.

"That kind of place," Berg told him.

"Look," Berg said. He was seated in front of George's Tandy, his fingers skittering across the touchpad like a gavotte of spiders while he looked over his shoulder at George. It was a virtuoso performance. For the first time, George felt a flicker of hope.

Symbols, numbers, and odd graphics

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swirled across George's monitor in eye-blurring succession. "Close your eyes," Berg said.

"What?"

"Close your eyes."

George squinched his eyes shut, feeling foolish. The soft whisper of Berg's fingertips crescendoed, then stopped. "OK," Berg said. "Codes you don't have to know. Open up."

The monitor now showed a fantastic sysop logo graphic, an intricately convoluted skull and crossbones. Berg grinned. "The bozos out there have a juvenile sense of humor."

"That's the—what did you call it? Denver Deep?"

"Yup," Berg said. "That's it. Don't look like much, does it?" He leaned back in his chair and cracked his knuckles, crick crick. George winced.

"It's the biggest black net in the United States. There's a bigger one in London, but I don't use it much. Most of the good stuff is here, anyway."

"Black net?"

"Uh huh. You think whoever grabbed your bank is gonna go peddle it on a street corner? No way. There's five or six sysops on this net, pass it around so it's harder to keep track of. Mostly they operate on compromised Ma Bell systems, way down under. They skim 10 percent on every transaction. Way it works, you've got some goods to move, you put them out here. Do your deals. They got credit accounts jimmied, do your transfers direct, anywhere in the world. Lot of African banks involved. You move your stuff, the guys get their ten, the banks get their deposits. Everybody's happy, except the IRS. And who gives a hot crap about them?"

The whole idea seemed entirely illegal to George. But horribly logical, as well. Stolen data marketed on illegal nets. Black nets. Of course.

"Do you think . . . I mean, it must be quite well protected."

"Sure. But there are ways."

"There are?"

"I'm the Iceberg," he said. "There are always ways."

But after twenty minutes, it didn't seem that Berg's ways were accomplishing much. He made several lightning probes, carefully targeted data inquiries, but turned up nothing. Finally he exited the black net, cracked his knuckles again, and shut down George's machine. He didn't seem unhappy.

"I didn't expect to turn up much, working off the top of my head. You never know. But I found one thing."

"What's that?"

"It wasn't amateurs. I would have picked that up. If your bank is being marketed in the Deep, it's a pro who knows how to cover his tracks."

George felt something black and nasty turn over in his gut. "Then it's hopeless?"

"I didn't say that. I can do better stuff from my own equipment. And I will. We got two possibilities here, you know."

"Two?"

"Yeah. Either it was just accidental, some guy playing kick and run for whatever turned up, or somebody targeted you. If it's the first, the bank will turn up somewhere. It won't make the thief any money unless he can sell it. But if it's specific, then maybe you can pitch in."

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"Anything. Anything at all."

"Think about who might use your bank. A competitor. Another editor, maybe? A publishing net? I don't claim to understand your business like you do. Try to think."

George stared at him in disbelief. Somebody in the business stealing his bank? It was unthinkable. Or was it?

"I don't know," he said slowly. "Like you say, I'll have to think about it."

"You do that. And I'll take it from my end." Berg stood up, a short, scrawny man whose pungent presence filled the small room. "Keep it up, George. We'll get it."

After he'd gone, George stared at the blank monitor screen. It was a window on a world far vaster than he'd ever imagined. And his bank was out there, nothing more than a chip for sale.

He sighed. A competitor? He couldn't imagine. But he sat down and began to access the various publishing and review nets. He was coming to understand. Anything was possible. Anything at all.

His *life* for sale.

Over the next two days he heard nothing at all from Berg. He spent the time trying to hold up his end, trying to think. But it was impossible to confine his thinking to the trails of possible theft, and time and again—unbidden—he would find himself examining his life, his memories, as if he could somehow recreate his stolen bank from the confines of his own skull.

Somebody had once made a remark about the unexamined life, but he couldn't recall the exact quote, and didn't care enough to search it out. Wasn't worth living? Possibly. But hadn't he done just that? Introspection was not one of his virtues. He had worked all his life, and work had been his life. The constant updating of his bank, the ceaseless quest for new writers—he'd told Berg he didn't have much money, and now he wondered why he'd said that. He'd poor-mouthed without thinking, but not from any intention to defraud the swashbuckling little man. He simply didn't count his riches by a rising total of credit in the bank. There was money there. He thought about that and resolved to tell Berg the next time he saw him. Don't worry about the credit, Berg, I can handle it.

Because he did get paid. And as he considered the ways and means of that, viewed through the cynical microscope of theft and destruction, he began to understand what Berg had been driving at. There was, indeed, financial justification for the evil that had been done him.

In the course of a year he might find five or six new writers worthy of development. He would also mark at least two thousand new works by already established authors. Of course he didn't read them all. His database did that. It also kicked up the specials, the good ones, who would eventually become his Finds. He called his listing the Stanley Steamer, a rueful bit of pride based on a secret passion—once, he'd loved the old cars. They no longer existed, but he collected data—pictures, specifications, holographic models. Anyway, the Steamer had a certain amount of prestige, he supposed. He had a contract with BestSell to pick three of their

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monthly selections. His imprimatur, combined with BestSell's very wide distribution, generally guaranteed good sales for those books. He had similar contracts with other nets, and the combined income from all of them was, if not considerable, at least comfortable. He received 1 percent of net sales, the income deriving from an automatic one-time fee charged for downloading a book.

Those contracts, while his bread and butter, weren't his true love. He spent more time and more affection on the five or six new writers he discovered each year than on all the rest of his work. That was the true joy and prestige. The payback. When he'd discovered Lucia Gibson and shepherded her first two novels into distribution, the resulting critical and popular acclaim had more than justified the time he'd spent. And, finally, even the money had come. Lucia's latest, *Time and Well End of It*, had been downloaded almost three million times. His share was ample, but that his peers respected, even envied his discovery was far more important to him.

For a moment he stared at the empty monitor screen across the room. No more Lucia Gibsons? Was that possible? Could he live without the pure joy of fishing in great datapools and occasionally, oh so rarely, pulling back his line with a great, glittering fish on the end of it?

He didn't know. But he could understand somebody stealing his fishing equipment now. He could even think of a few possibilities. Dammit, where was Berg?

* * *

On the third day Berg returned. He didn't call first. He bypassed the building security system and knocked on George's door. George felt a tiny thrill of fear at the knock, a city kind of unease. He knew nobody in his building. "Who's there?"

"Berg. Let me in."

The fear dribbled out of his spine, leaving only a faint curiosity. How had the man gotten in? He opened the door. Berg seemed more subdued, less hopeful, and George felt depression begin to settle like a shroud. Bad news overlay Berg's foxy features like a mask.

"What's wrong?" George said, after he'd offered, and been turned down on coffee, tea, Coke, and scotch. Berg had brightened mildly at the scotch, but then thought better of it.

"Naw. Too early," he said.

"Not in Australia," George said with false heartiness.

"We got problems," Berg said. His voice was flat. To George he looked like an overaged thrash hacker. He wore scuffed black boots, black jeans, a black leather jacket. His T-shirt announced, NIHILISM IS USELESS. Under other circumstances, George might have found that funny.

"What?"

"I think I found your bank."

"What?" George felt stupid. What? What? A spluttering old man.

Berg exhaled slowly. "I went into the Deep with my own stuff. Cracked a few black deals. Your bank went through, all right. A done deal less than a day after the burglary.

"But isn't that good news?"

"I wish. It was too slick. Too professional. You were a target, my friend.

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Somebody set out for you. I don't know who did the job. It's not important. They did it, got paid, and that's the end. The question is, who got the swag?"

Swag? What a curious word. Archaic. "Can't you find out?"

"Well." Berg seemed to turn possibilities over, like shiny coins, to examine their sides, their edges. "It went into one of those big, shifting, formless situations. A congo, looks like."

Congo. Not archaic. Jargon for conglomerate. George shook his head. "I don't understand."

"Somebody's moving to corner things, is what it looks like. They didn't just want your bank, they wanted you out of business. That's why they crashed your system. I bet if you'd had backup, they'd have found it. Wiped that, too. You had a specialty thing, you see. Now they have it."

The idea seemed too big, too ugly, to encompass all at once. "You mean some conglomerate is trying to put independents out of business?"

"Looks like," Berg said slowly. "And that's stupid, of course. The independents are where the ideas come from. The congos know it, but hate to admit it. They won't change their system, not when it's easier to steal. The Russians, for instance."

George was lost. "Russians? They stole my bank?"

"Naw. But they used to work like that. Their science was crippled by their stupid system. They didn't change the system. They just went out and stole as much as they could. It destroyed them eventually. And the congos will be crushed by it, too, in the long run. But they don't care about the long run. You got too good, George. That's what happened."

It was an amazing idea. He looked around his apartment. Small, simple. The thought that a giant conglomerate would find him an appetizing target was almost beyond belief.

"You're a big name out in the world, George. Stanley Steamer means something. Enough that the hardball guys took an interest. You should have had protection."

It was too much. He tasted his own coffee. Cold and stale, the powdered cream floating thin and milky on the top. "Is there . . . I mean. What can I do?"

"That's up to you. You have to find that congo. Whoever's using your bank. And they will be, of course. But there's only one way to pick it out. From their product. They'll think that way, of course. Authors as product, books as product. They aren't so smart. Look at it, George. Watch the nets. Find out who's picking *your* kind of writer. Then tell me."

George felt stunned. Watch the nets? Without his bank? "And then . . . ?"

"Then," Berg said grimly, "I'll steal the fucker back."

It was all on him. Berg left. George got up, made a face, and dumped the coffee. He rinsed out the mug and glanced at the bottle of scotch still out on the kitchen counter. Laphroaig. He didn't drink much, but he drank well when he did. He pulled the cork from the bottle and filled the mug half full, added a splash of water right from the faucet. Carried the mug back to the living room and sat down in front of his

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Tandy. Hit the power switch and waited for the chip-embedded diagnostics and operations routine to finish. It took only a few seconds. He tapped the touchpad and stared at the new graphics. He was on A-Net. Another entry, and he found himself looking at the most recent selections on BestSell.

He stared at the titles, trying to probe their mystery, but they were only words. Then he had himself a big old drink.

It had been almost twenty years since he'd done it this way, slowly, painstakingly, downloading each selection summary. BestSell was featuring about three thousand titles. He finished with that, transferred everything to a minichip for later printout. Then he went on to PubLine. And then to Editor's Choice. And then—

His head hurt. He raised it from his desk and peered blearily around. The harsh yellow light from the fixture over his desk gave everything a malarial appearance, as if somehow his apartment had become washed out, faded, old. The bottle of Laphroaig was by his right elbow, empty.

Did I drink that, he wondered?

Several minichips, small rectangular cases of plastic about the size of his thumbnail, were scattered next to his touchpad. He regarded them as if they were tiny insects, but couldn't remember what he'd done. If anything.

Finally he stood up. He groaned as his stomach heaved in rhythm with the movement of the room.

Scotch wasn't the answer. He went to bed.

The next morning, surprisingly, he felt fine. No hangover. He ate a hurried breakfast, the kind of thing a man alone fixes. Cup-o-Noodles doused with half a can of Campbell's Cream of Chicken, heated in the microwave. He made coffee, using whole beans this time instead of the instant he'd had the night before. Went back to the computer and started in again.

It took so long. He checked the new files on the minichips. Almost a megabyte of data. And that was just the cream. He was beginning to understand what he would have to do. If some big congo had his bank, it wouldn't necessarily show up on BestSell. No credibility. First, the thief would have to establish a track record, have to pick some books people actually read. Part of his own value was in the name of his service, Stanley Steamer. People trusted the name. Now, whoever had his databank would have to establish the same trust. Which meant he had to search everything, evaluate every editing service. Even the tiny freelancers, those who simply tagged their selections with a small review and recommendation.

Near the end of the paper publishing, the American industry was churning out thirty-five thousand fiction titles a year. That had increased by a factor of ten.

He sighed and got to work. Drudgery. It had been a long time since he'd been a drudge.

It took him three weeks to do what, with his databank and search program, he could have once accomplished in three minutes. When he had it, he called Berg.

"Yeah?" Berg said.

"It's me. George Stanley."

"You got something?"

"I think so," George said.

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"OK," Berg replied. "Let's take a look."

"Here's what I did," George said. His voice was very clear, very serious. It had been good for him, the long days, the longer nights hunched in front of his monitor, his fingers dancing on the pad, his eyes growing strained and red from the endless cascade of words. But he'd done it. The old skills still worked. Somehow, out of that long labor, had come hope. They had stolen his life, but maybe, just maybe, he could build a new one. And, of course, there was the Find. That was the best thing of all.

"I checked all the standards first, of course. BestSell and the others. I only found three new imprints, new editors, and none of them in my speciality. The old ones—I know them as well as my own fingers—they're still the same. So whoever, they aren't using the big outlets, not now. But."

Berg sat and listened quietly, his gray eyes foggy. But his big nose was tilted alertly, and George decided that he could be a very deceptive man.

"Then I started searching the open pools, A-Net, CompuNet, like that."

Berg nodded. "Looking for new names. Editors starting out. That's good. That's how I would have done it."

George nodded. "And I found —nothing."

Berg blinked. But he didn't say a word.

George smiled, and Berg nodded faintly. There was a joke. He waited for the punchline.

"No editor is using my database. But . . . right here." George held up a chip.

"What?"

George showed him. Then Berg, a thoughtful, nasty cast to his eyes, told him what they would do.

There were several of George's authors living in the city. Once he explained what he was up to, they all agreed. By nine o'clock the following Thursday, fifteen people were having a pretty good time in George's living room. Berg seemed to be enjoying himself most of all.

"That's Lucia Gibson?" he asked, nodding at an angular, chain-smoking woman with short salt-and-pepper hair and a nervous, jerky way of moving.

"That's her," George said.

For once, Berg seemed nonplused. "Do you think . . . I mean, could I just talk to her?"

George grinned. It was amazing how laymen were so in awe of his cantankerous, fractious, sometimes childlike writers. "Sure," he said. "Introduce yourself. She won't bite. I don't think." He paused. "Tell her you think she's great. That usually works."

Berg breathed, "I do."

George knew his guests. He would have known them even if he'd never met them before. That was why he'd brought in a rental bartender and bought an enormous quantity of booze. Put out extra ashtrays. It was amazing how writers flouted every health maxim, less only than how many of them seemed to live to incredible old age.

But he felt a warm glow. These were good writers, some perhaps even great, and every one discovered by him. This was his reputation, gathered in his living room, drinking and smoking and chat-

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tering and arguing. He checked the wall clock. Soon now, the guest of honor.

The reason for the party. He felt his stomach clench a little, like a hard fist beneath his heart. Berg said it would work. He hoped Berg knew his business.

The doorbot downstairs buzzed and George moved to the building monitor. "Yes?"

"Mr. Harlow Thompson," the bot said. "He is on your list."

"Fine," George said. "Send him up."

He crooked his finger at Berg, whose eyebrows went up. George nodded. "On the way," he said.

"Good," Berg replied.

Harlow Thompson knocked on the door. Berg opened it. And George said, "Harlow. Welcome." He turned. "People, I want you to meet the Stanley Steamer's latest pick. This guy's gonna be a star!"

Everybody applauded.

Harlow Thompson looked average. There was no other way to describe him. He was about five ten with sandy brown hair cut short, brown eyes neither bright nor dim, a straight nose, regular build. His voice was almost without accent, the kind of voice newscasters develop. He wore a tan sport coat, blue shirt, dark brown pants. No designer labels were in evidence. His handshake was not limp, not firm. He spoke softly, diffidently, and would have faded into a crowd of two. His palm was dry.

Not nervous, George thought. I would be.

He tried to imagine this unassuming man as the demon who'd stolen his life, and failed. Not evil, just the familiar dry desperation of a writer who would do anything to make it big. And not even understand the difference between himself and the rest of the people in this room. George shivered.

"Harlow," he said again. "I'm glad you could come. This is in your honor, you know. A little tradition of mine. Welcome aboard party."

Harlow nodded. "I appreciate it, Mr. Stanley."

"George, please."

"Of course . . . George."

"Well. Right this way. Something to drink?"

Thompson followed him to the sweating bartender. The noise of the party rose and fell, sudden laughter, a shriek, two masculine voices rising in argument. "A beer? Budweiser?"

"Certainly." George fetched him his drink, then took his elbow and guided him into the crowd, introducing as he went. Thompson didn't seem at all awed by the company. If anything, he seemed vacant, not there. Finally, George said, "This is Jack Berg. Jack, Harlow Thompson."

The two men shook hands. Berg seemed quite drunk. His gray eyes were bright and filmy. He swayed slightly as he took Thompson's hand, and clapped him lightly on the shoulder. "Good to meet you, guy," Berg said.

"Jack is another of my stars," Stanley said. "You've read his *Dreamlives*, of course?"

"Oh, yes," Thompson said. "Nice job, Berg."

"Well. I'll leave you two. Have a nice chat now." George turned away.

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He was sweating heavily, not all due to the press of the crowd.

He wormed his way across the room and found a vacant niche next to his sofa. He watched Berg and Thompson as they stood next to his computer. The two men talked desultorily, in the manner of strangers exchanging politenesses. After a time Berg shook the man's hand again, said something, and made his own way across the room.

"Well?" George said.

"Complete phony," Berg replied. "I'm not a writer, but that guy doesn't know anything about science fiction. Not a goddamned thing."

George nodded. "He wrote a hell of a book."

"No," Berg said. "You did."

George regarded the impostor thoughtfully. "I don't know why I didn't think about it," he said. "My databank was me, everything I knew about science fiction, about writing, publishing, all of it. I assumed another editor . . . you did, too. But the blueprints were there for the perfect Stanley Steamer book. That was his mistake, of course."

Berg nodded.

"It was too good. I found it by accident, scanning one of the amateur nets. I couldn't believe it when I read it. It was my book. The second book I'd never written." He sighed. "I checked for other stuff by him, found a couple of stories. It was like reading a different author. The man who wrote those stories could never have written the book."

Berg rubbed his upper lip. "He didn't. It's an interesting question. Is it plagiarism, what he did? He didn't steal any of your words. He just wrote a book your databank thought was wonderful, word for word."

George shrugged. "What now?"

"Easy. He's a hacker, good enough to make a deal in the Deep, find somebody to do some work for him. A little breaking and entering, whatever. And good enough to fool me a while, too. After you told me, I traced him. He works for Nakamura/Norton. He used their machines to make his connections, even paid off with Double En funds he embezzled. That threw me. But now he's playing with me, head on head. No contest. He's gonna go home tonight and find a terrible thing. Somebody burglarized him. Nothing taken, no jewelry, computers, money. Just his databank. A shame. You know, the cops don't investigate stuff like that. And I wouldn't be a bit surprised if his diddling with company machines doesn't somehow pop out on his boss' desk monitor. He's in for a bad time." Berg glanced at him, and the ghosts of dead pirates glittered in his eyes. He reached into his pocket and took out a small black square with holes in it. "The burglars must have gotten his key somehow. Maybe on his way over here."

George remembered the way Berg had patted Harlow's shoulder, touched his back, even put his arm around his waist once. He'd thought it part of Berg's masquerade of friendliness. Now he understood Berg did nothing without purpose. He would be an appalling enemy. Harlow would find out. Hoist on his own petard. The phrase took on real meaning.

"You'll have everything back tomorrow," Berg said.

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Stanley nodded. He felt a hundred pounds lighter. "I'll do a credit transfer. Just tell me how much I owe."

Berg's foxy face beamed. "Oh, that. Well, I talked to a lot of people here tonight. You know, explained the situation. And, uh, well, there's no bill. It's taken care of."

"Now, wait a minute—"

Berg's grin went wider. "Here. I'll let Lucia explain."

Before George could reply, Lucia Gibson slid around his elbow and blew smoke in his face. "He's right, George. Our treat. For once."

"No. I couldn't let you—"

"Too late, George. Don't you understand?"

He shook his head.

"You remember my first book?"

"Of course."

"Terrible, wasn't it?"

"Well . . . "

"It was terrible," she repeated. "But the second was better, wasn't it?"

Slowly, George nodded.

"How much time have you put in with me?" she asked. She didn't wait for an answer. "Hours, days, weeks? And the same for every person in this room. Telling us when we wrote crap. Stroking us when we did good. Suggesting, advising, demanding. Demanding our best, never less than that. George, old guy, some writers may be born, but most are made. And you made just about everybody here."

He felt a hot flush rising in his cheeks. "Now, Lucia—"

"Can the bullshit," she said. "This dance is on us." Her eyes went thoughtful. "You know, when we were writing about this stuff years ago, everybody talked about a new role for editors. Becoming nothing but glorified literary touts, picking books just like you pick horses. We were wrong. We didn't see it, back in the days when acquisitions editors bought books just to fill monthly distribution slots. We didn't see the tech would let you do your real job. The one everybody forgot about."

With a rising sense of release he found he understood her. And realized his database had been essential, but had never truly been his life. It had ranged the datapools for him, found the writers, tagged the names. It had even written his own book, but there was one thing it could never do—show other writers how to write their own books, transform dreams into their own words.

"Yes," he said, and thought how pitiful Harlow Thompson really was. Out of the corner of his eye, he saw Berg edge quietly out the door. Poor Harlow.

"You edit, George. You are an editor," Lucia said. Her voice was husky. "We know what it means."

"Yes," George said softly, knowing the truth at last, finding for the first time freedom in the hundred meanings of that word. "I am, aren't I?"

She blew smoke in his face and patted his arm and drew him back into the crowd.

He went willingly. It was, after all, his crowd. ■

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The Alternate View

THE MYSTIQUE BEAT GOES ON

G. Harry Stine

I have from time to time, in this department, belabored the highest of high-tech, the computer industry, for various shortcomings as perceived by one who has participated in a lot of its history from the time I wrote my undergraduate thesis on computers back in 1952. Granted, the progress has been astounding. However, from time to time I am brought up short by unbelievable factors . . . especially when I up-grade to better computer technology and am therefore forced to deal with the state of the art as it might happen to be at that moment.

Here we go again, folks, so hang on to your hats while the *Analog* mail room stands by to receive mountains of both hate mail and kudos.

I have a perfectly functional 1979 computer on which I've been writing books, magazine articles, letters, and other documents since that date. It has a perfectly beautiful and fully functional "word management program" (not a "word processing program") that occupies 8K of a 48K RAM. It is fast and easy. Over the years, I have lost only about 200 words of text because of dumb mistakes I've made.

But the old drives are getting a bit sloppy, and it's difficult if not impossible to get them fixed any longer—to say nothing of the fact that it's getting tough to find 5-1/4-inch 16 hard sector diskettes. If it ever goes down, I know I will never be able to get it fixed or find spare parts for it because the company that made it went toes-up shortly after IBM greased the market with the original PC.

So I got a neat deal on a new AT clone with a 20 meg hard card, 640K RAM, color monitor, and a new printer. And some new software that runs in MS-DOS which is the IBM PC compatible operating system.

And I started looking for a suitable word processing program that would run in MS-DOS.

In the first month, I evaluated 14 different word processing programs and rejected all of them as unsuitable for use by a professional writer.

Oh, some of them were lovely and had all sorts of neat bells and whistles, none of which contributed one single thing toward turning out page after page of double-spaced pica-type manuscript with a numbered page header and one-inch margins all around just like The Editor wants to see.

For example, some could not print a sequential page number.

Others did not have a word count utility, an absolutely essential feature when The Editor decrees, "Fifteen hundred words, period! For the Pope, we might allow eighteen hundred words!"

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What appeared on the screens of most of them was a pile of garbage, most of which was of no interest to someone who is pounding it out by the yard and doesn't care what each page *looks* like as long as it is neatly typed in 10-pitch double-spaced letter-quality font with one-inch margins all around. All I really want to see on the screen when I'm working is the text I'm working with, not the margins and fonts and indents and tabs and line rulers and layouts.

I discovered that some programs that were touted as "100% PC compatible" weren't if the computer didn't have an exact duplicate of the IBM PC keyboard. Now there is nothing that bothers me more as a writer or as an operator of *any* machine than to have the control knob or switch or key or instrument face say one thing when it really does something else. People have been killed by such things—although I do not expect to be killed by my newest computer after it tells me, "Author, I have replaced you!" just because it can spell, parse sentences, check grammar, and answer my typed questions in plain English. I do indeed occasionally look down at the keyboard after I've touch-typed some text and want to make sure that I've saved to disk; under those conditions, a mislabeled key severely interrupts the flow of ideas from mind to fingers to RAM.

After spending hours and days and even weeks trying to find a modern super-duper word processing program that would do the same things that my 1979 8K word management system would do, I still haven't found one as of this writing. The ones that I have "driven" in my new computer all have something wrong with them and do not have all the utility that the old system did. The new ones use up 300K or more of RAM and don't do what the old program did!

What's going on here?

Do you mean to tell me that ten years of software and computer development can't produce a program that measures up to one copyrighted in 1978?

Looks that way . . .

Why?

Several reasons, probably.

The first, of course, is the continual American penchant for development simply for development's sake. In past columns, I have commented acerbically on neglected technology and the dictum that "good enough is the enemy of the best." Sometimes the technicians simply cannot leave well enough alone; they must "improve" it.

Another reason is "marketing."

The late Robert A. Heinlein once remarked in a guest editorial in this magazine that fewer than a thousand people in America actually made their living by writing. This may have increased somewhat since computer word processors and all their bells and whistles allowed many people into the game, people who couldn't spell or write a simple declarative sentence without computer help. In any event, developing a word processing program for professional writers would certainly be looked upon by most marketing managers as a one-way trip to Chapter 11 because the market is perceived to be so small.

Marketing people therefore decreed that word processing programs should be developed for the *Big Market* which is: office workers, secretaries, and cler-

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ical workers.

They had their way. Upon reflection, after evaluating more than a dozen word processing programs, it is obvious to me that they were developed for secretarial use. No other rational reason can really be found for the current state of affairs.

Why, then, have so many people who write for this magazine told me in glowing terms of the "best word processing program" they've found for use in writing?

In the first place, these authors probably hadn't been spoiled in 1979 by using the simple word management system I'd grown used to; I was one of the first authors to become computerized. They came in later when the only thing available to them was one of the modern super-duper programs. They got used to them. These programs weren't optimized for authors, but they were the best that were available.

However, I think I've found one, and it's so new that a review copy hadn't reached me before the deadline for this column loomed on my calendar. It's a program specifically tailored to professional authors. If it turns out to be for real, I will certainly pass along the information because a lot of readers may have discovered that they are in the same boat wherein I found myself. (Because of the ubiquitous personal computer, many more people today are writing than in the past. You should see the increase in my mail!)

In the meantime, how am I writing this? On my old system? No, this Alternate View column was written as a test of a simple word processing program I stumbled over in a local book store that also mongs software.

It uses only (only?) about 317K of memory, runs MS-DOS, is fast, and has every utility I need except the ability to print the first page of Chapter 11 as page 210 and count words.

The book store, which is right across the mall from a large consumer electronics chain that also sells computers and programs, had this little word processing program on clearance because no one wanted to buy it. Its retail cost was $10.95.

Say again?

Yup, $10.95, while the cheapest shareware program I could find was $89.00.

I bought it on sale for a mere $9.00. It didn't sell well because it wasn't glitzy enough and didn't come with a thick manual of "documentation."

I loaded and learned it in less than 30 minutes. It has some little problems, but nothing serious. In fact, it has fewer problems than any of the other high-priced programs that I tried. I couldn't write a novel with it, but it's perfectly good for writing an article or a 30,000-word novelette.

If I was a programmer, I'd add a couple of little utilities and have a real good professional writer's program.

But even as it stands in all its bargain basement glory, it was good enough that I could write this article with it and also check spelling.

Which means it can be done and done cheaply. So much for the charisma of programming!

So there may be hope out there yet.

And if you think this sort of high-tech tomfoolery is confined to the computer industry, just don't push my button when it comes to aircraft whose wing

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spars crack because of repeated landing gear retractions, four-wheel-drive automobiles that don't have enough road clearance to drive them anywhere except on paved surfaces, and spacecraft that . . . Well, never mind. You've probably got your own pet tech gripes, too!

In the meantime, the computer mystique beat goes on . . . ■

FUTURES

(continued from page 75)

Yet, Killer Klowns (Media Home Entertainment, 5730 Buckingham Parkway, Culver City, CA 90230) is another example of treating a concept with respect.

The idea is that aliens, who happen to resemble gaudily made-up clowns, have landed on Earth. (There's some allusion that our clown images may have historically evolved from previous visits of these aliens.) Belying their circus image, these bozos are actually out to harvest the planet's human residents for food.

Now, the idea that clowns could be so evil would be no news to my five-year-old daughter, who finds all clowns frightening in all their bumptious excitement and permanent grins. This film takes that child-like apprehension and nourishes that idea with a respect and creativity that is nothing short of brilliant.

The film is the brainchild of Edward, Stephen, and Charles Chiodo. They brought to the production backgrounds in animation, matte effects, and three-dimensional miniatures; the film looks much more expensive than its modest budget should allow.

The motif of clown and circuses was extended into every area of the alien invasion. Their ship, marvelously rendered, resembles an enormous circus tent (as it sits in the woods, half-buried in the dirt.) The corridors and chambers of the ship are of a candy-colored Caligari fun house.

All the townspeople respond to the over-sized clowns in a nervously funny way, until the clowns strike. The clowns fire deadly popcorn guns and wrap their victims in some goo that looks suspiciously like cotton-candy coccoons. There's even lethal cream pies and a clown-directed finger-shadow play that transforms a wall shadow into a human-gulping monster.

Now, at any point in the film the absurd premise could quickly go flat and dumb. But it doesn't happen, due to the sheer power of the frightening, child-like images and the easy way the film flips from surprised humor at the Killer Klowns to shock and horror.

The film garnered good reviews, including one from the normally reserved *Variety*, and it is easily one of the more creative films of 1988. ■

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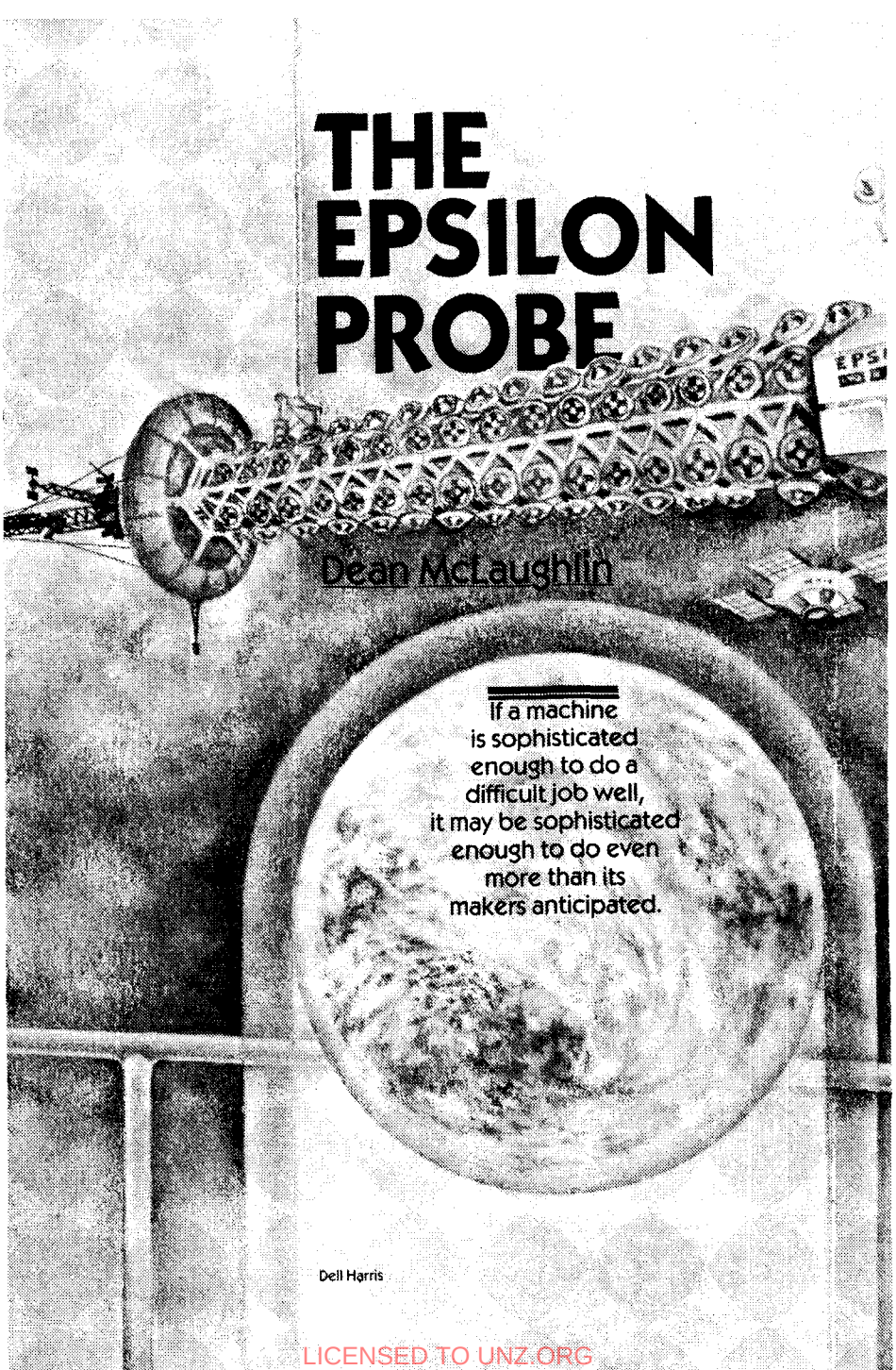
THE EPSILON PROBE



Dean McLaughlin

If a machine is sophisticated enough to do a difficult job well, it may be sophisticated enough to do even more than its makers anticipated.

Dell Harris

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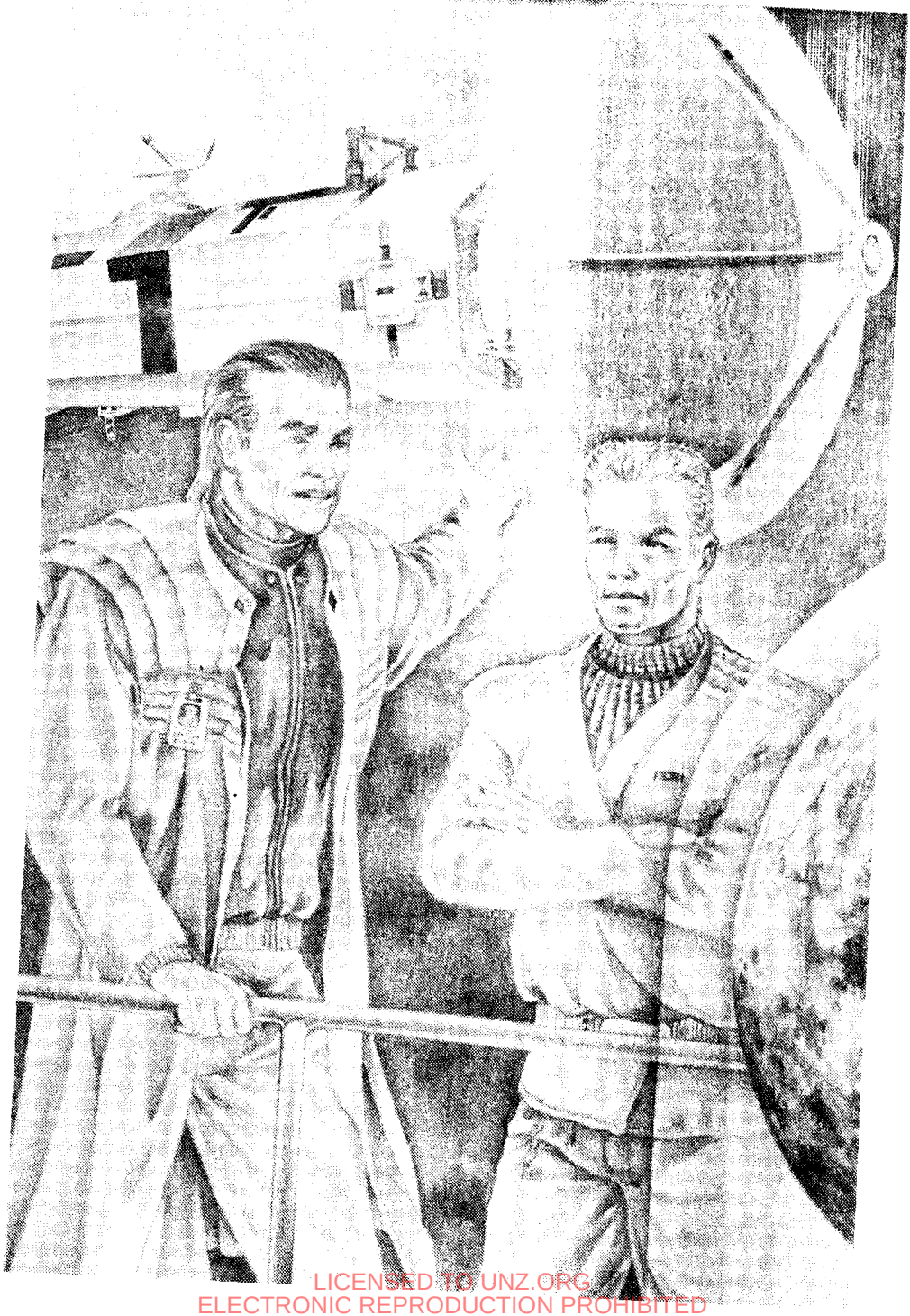

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The post encounter data stream was still coming in and would continue to come for weeks, months, even—if all went well—years, but Carradyne, T. Martin Carradyne, was worn down to the nub in both body and being. Stumping out by the back way, he whistled up his car, plunked down his shoulder bag, and climbed in.

"Home," he said.

"Right away, sir," it said. Smoothly, almost as if floating on air, it drifted from the curb. "Rough day, sir?"

"You'll never know how rough," said Carradyne. With a shudder he slumped down in the seat, which easily adjusted to the shift of his weight. He hardly heard the growl of traffic around him. His thoughts still thundered with impressions of Epsilon and its worlds, so much so quickly glimpsed, so much of which the barest hint had been seen. A dazzlement of wonders, enigmas, and sheer impossibilities.

Had any of it truly happened?

"Here you are, sir. Shall I wait?"

It had seemed an age, yet he remembered none of it. Had he slept? "Tell Homer I'm on my way up." He climbed out, stood unsteadily a moment on legs that ached with deep fatigue. All that tramping from station to station, to be assaulted at each by new marvels, new questions, new thoughts until his mind became kaleidoscopic chaos, and through it all the grand euphoria of triumph against terrible odds. The probe had done it!

"Shall I wait?" his car repeated, and suddenly his feet were back on solid earth.

"Go to your hutch," he said. "I won't need you for a while. Thank you, Murgatroyd."

"Happy to serve you, sir."

In his apartment he ordered up cocoa and a muffin. "Just one this time, Homer." Sensing his mood, the kitchen performed without talk. He ate off the serving counter, drank, washed, and turned in. For almost fourteen hours he slept deeply. Had the phone not wakened him, it could have been days.

"I'm sorry, sir. They say it's important," Homer said.

"They have the code?" Carradyne asked. He rolled over on his back.

"They have the code," Homer said.

He'd known they would, but it gave him time to work out where he was. Not the couch in his office. Home. "All right," Carradyne said. He did a few isometrics, knuckled his eyes, started to sit up. "Voice only, here."

"I assumed that," Homer said. Was there miffed pride in that tone?

Fred Habash came on. Well, who else? Not many had the code. "Sorry to get you up," he said. He looked like he could use fourteen himself, but his face always had that sad hound's look. "We've had a problem come up."

Understanding came slow, Carradyne sat on the edge of his bed, his brow in the palm of his hand. They didn't need him for problems. Not technical problems. Those young kids—under fifty every one of them—for all he knew they waved hands and spoke spells over their black boxes.

He looked up. "*The* problem?"

Fred Habash nodded. "That's the one. Have we got an answer yet?"

For a while Carradyne just sat there blinking through sleep-crusted eyes at

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the sad waiting face in front of him. "All right," he said at last. "Let me get some breakfast and I'll be right down."

"Better eat on the way, sir. He already thinks we're stalling."

Carradyne was reaching for his socks—or should he take a shower? "Who's this 'he'?"

"Willyum Best," Habash said, taking care to pronounce all the syllables.

Well, it could be worse. Ghengis Khan and his horde could be trashing the place. "How much does he know?"

"He's asking the right questions. Checking into the mission history. Fishing, but he's got something."

"Uh huh. Well, let him know I just got up and I'll talk when I get there. Don't talk to him yourself. If he gets impatient, have Koomi tell him I'm an old man."

"He knows that," Habash said. "He wants to know what you know and when you knew it."

Nodding, mouth crimped in a grimace, Carradyne trudged toward the shower. "He would."

Murgatroyd didn't get much opportunity to serve meals, but he had full stocks in the cryo. "Breakfast? The usual, sir?" he asked as he inserted into a break in the traffic.

"Right. The usual. Double on the orange juice."

"Double orange juice. Right away, sir."

Carradyne slouched lengthwise on the wide seat. Outside, tall towers marched past the window.

"Music, sir? News feed?"

"I want to think." Not that he had much to think about; not until he got a feel for how much Willyum Best really had. Murgatroyd slowed for an intersection, then boosted smoothly to pop through a gap in the cross traffic.

He thought about the probe and the moments his life had intersected with it; about truth and error, uncertainty and fact, youth and age, and what a wonderful place the universe was. How it could startle the most stultified mind.

Breakfast appeared. Poached eggs on whole wheat, farm style sausage, hash browns, coffee, croissant and orange juice. Lots of orange juice. "Excellent, Murgatroyd. Thank you," Carradyne said, and fell to.

"Happy to serve, sir." Curving into the greenbelt park past the sunbathers and the Indians with pots and rugs for sale, Murgatroyd swooped down a ramp under arching oaks and elms, merging sleekly onto the beltway. A standing wave quivered on the surface of Carradyne's coffee as he lifted it to sip.

"Murgatroyd, you make excellent coffee."

"Quality control in the beans is very important, sir."

Buying the beans was a task Carradyne kept for himself. Sometimes he wondered what Murgatroyd's real thoughts were. Was he really just a complicated reservoir of programmed responses? Did that make him different from a man? The sausage was warm, almost greaseless without being dry; black as cinders and spiced with bay leaves and sage and herbs for which he did not have a name. Where butter had not softened it the toast was crisp and the egg was soft as . . . well, never mind what it was as soft as, and as

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warm. Carradyne almost forgot where he was.

"Sorry to intrude, sir," Murgatroyd said in his most apologetic tone. "Traffic control advises that the quad county nexus is expected to be congested beyond rated capacity and that alternate routes should be considered where possible. Accordingly, I have selected the way past the lake, subject to your approval."

And some people thought humans still ran things. "Murgatroyd, you know the way better than I do."

"I did not want you to think there was a malfunction, sir," said Murgatroyd.

Maybe it had always been true. Maybe it had always been the servants who were in charge, always too polite to mention it. Carradyne sighed. "Murgatroyd, you've got essentially the same innards as what flew from here to Epsilon and planned the encounter from a quarter light-year out with not so much as one kibitzer close enough to second guess until after it's happened. If anything, you've got some improvements. If he could do that, you can get us across town without an old man saying you're doing it wrong."

"There remains the possibility of a malfunction, sir."

"And the stars might fall."

"It is believed they are always in free fall, sir," said Murgatroyd. "Did you mean something else?"

"Forget it," Carradyne said. Then, "Uh . . . ignore that. Figure of speech."

"Taken as such, sir. I have noticed you do not always say what you mean."

"It's the way I'm built. Sorry about that." Cradling the warm coffee cup in his hand he leaned back to look out across the lake, the white crests on the waves, bright harlequin sails crisp to the wind.

"Quite all right, sir." The breakfast dishes disappeared into the recycle. "More coffee?"

"Not yet, Murgatroyd. You know, Turing would be proud of you."

"We call him Grandfather," said Murgatroyd sententiously.

Was his leg being pulled? Leaning forward, Carradyne set his cup down on the serving ledge. "On second thought, warm it up a little."

"With pleasure, sir."

Simulacra vans crowded around the front entrance. Another stood skylined on the lawn, its loose braid of cables slithering across the grass, through the flowerbeds, and inside by way of an access port. The car park, though, was only half full. As Murgatroyd tooled up the drive, Carradyne did a fast eyeball survey and made up his mind.

"Better I go in the back. Can you swing us around?"

"No trouble at all, sir." Murgatroyd's engine surged.

The back way was lodged in a niche between two sprawling wings of the building, close up to the tower. "Shall I wait?" Murgatroyd asked as Carradyne climbed out.

Reaching back for his shoulder bag, he shook his head. "Nah. I'll be a while." All day maybe, and maybe half the night. "How's your gas tank?"

"My capacitors are charged to 84 percent, sir."

"Yeah. OK. Capacitors. That's what I meant. So you don't need to tank up.

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Find a place to park and link up with building systems. That's Winstead. When I need you, I'll call."

"Very good, sir." Murgatroyd buttoned up and moved off. Carradyne took the steps up to the loading dock two at a time and was surprised when the effort took his breath. Have to get his arteries chelated again one of these days, or his lungs resurfaced; maybe both. The portal next to the freight access recognized him, opened in welcome. Suddenly, behind him, came the scuffle of running feet.

"Mr. Carradyne!" Shouted. Urgent. "Mr—" and the clunk of the portal closing, snick of the bolt.

"Thank you, Winstead. That was close." Still short of breath.

"A pleasure, sir."

The elevator saw him coming and parted its doors. "Your office?" it asked, already starting to lift.

"Got to talk with Fred right away. Whatever floor he's on, stop there."

"Mr. Habash is in the rectification unit. An anomaly has been noted in several threads of the data stream. They are trying to decide if it is real or only an instrument malfunction."

"Or transmission, or reception," Carradyne nodded. "Or some funny combination of all of those."

"Shall I suggest that to them, sir?"

"Can if you want. If I've thought of it they probably have."

"Better that I offer the thought than let it go unconsidered," said the elevator. "If it is redundant they will ascribe it to a well meaning but not very bright machine and will not feel insulted. Here you are, sir." The elevator stopped. "Turn left and it will be the third door on your right."

"Thank you, Winstead. I think I can find it." Somewhere, did Alan Turing's ghost laugh softly at some private jest?

In floor plan the room was a slice from an elliptical pie. Unmanned work stations lined the walls except where glassed-in cubicles crowded near the door. Only Fred Habash and three others were there, and they were huddled around the holo display that filled the wide space near the far side when Carradyne walked in. Fred looked around and started to come over. Carradyne gestured him to stay where he was.

The holo was showing Epsilon's inner system; Epsilon herself a shimmering central ball the size of a small marble. Tiny wisps of flame flicked from her surface like threadlets unraveled by wind. Her terrestrial planets, five of them, were embrous motes randomly placed around her, each in an orbit shown as a thin, smoky, quivering trail. On one side of the star the orbit of Planet Four dipped steeply below the ecliptic plane of the others while on the other side, ascending, it passed outside the orbit of Planet Five and rose even higher above.

That orbit had put the knife to something like seventeen theories of planetary formation, Carradyne thought with a bitter smile—theories crippled by fact—but that had been known for almost a year. It couldn't be what they were concerned with now. "What's the problem?" he asked.

"Here?" Habash asked. The others here weren't privy to the mission's nontechnical difficulties, past or present.

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Picking up a lightstick, Habash projected a glowing beam onto the display to touch a thumbnail-sized triangular surface of ghostly blue. Suspended above the ecliptic plane, each of its points touched the gossamer-thin silver track of one of the probelets which had plunged through the system—strange to think of it that way—ten years before, news of which only now was arriving back home. "Whatever it is, it's real," he said. "Three of 'em caught it."

"Caught what?" Carradyne asked.

"Charged particles. Protons, mostly, and a few exotics. It's the vector that's queer; cuts right across the stellar wind. Wrong velocity, too. Just in that narrow zone, maybe nine klicks thick, max."

"Spreading out at all?" Carradyne asked.

"Scatter from collisions, is all. Otherwise parallel tracks as far as we could measure."

"Any of the other probelets catch it?"

"Not that we've found so far. We're still checking. Could be something in the post encounter transmissions. We're looking."

Carradyne stuck his hands in his waistband, back around where his kidneys were. The scent of ozone made him wrinkle his nose as he bent to examine the holo more closely. "And the shimmer's going the same direction as the particles? Like from somewhere outside?"

"That's almost it," Habash said. "Actually, we're showing where they were detected. Their path's at about a twelve degree angle to the surface you're looking at." Moving around to the holo's other side he demonstrated with the lightstick.

Carradyne moved in behind him and sighted down the length of the beam. "So probably of external origin, probably short duration, probably not related to anything in the system."

Habash nodded. " 'Less it's some funny disturbance in the magnetic fields, and we've no other signs of that happening."

"Mm. Cosmic Ray shower?"

It got a shrug. "Maybe. Have to be very high energy though."

"Yeah. Well, whatever," Carradyne said. He worried his lip. "Funny none of the other probelets caught it." One more time he put it through his brain. Nothing. "Get a team on it, or flag it for study later. You'll want to see if it correlates to any of the peculiar things floating around out there—not just the neighborhood, anywhere—Sanduleak objects and so forth. And might be worth working out when a simultaneous burst would hit us here, if it hasn't already, and make sure it gets watched for." As he spoke he saw the subliminal nods that told him they'd already thought of that.

Then Jason spoke up. "With that vector, it's already been here."

Carradyne blinked, reminded again of his deferred mortality. Old bones didn't move as fast, bend as much. Old brains didn't percolate. Aloud he said, "Yeah. Probably. Can you give me a line of sight back to where it came from? And where we were when . . . when it happened?"

Miranda moved to the control board. "Actual space relationships? Relativistic adjustment? From infinity? Or an

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expanding sphere? What curvature? Winstead, could you shrink the scale?"

"Certainly, Miss Vygotsky." The Epsilon system squeezed together, its outer planets moving onstage. Epsilon itself became a pinhead-sized point of amber brightness, sharp enough that it still seemed to light the worlds that circled it. "Enough?" Winstead asked.

Getting old, Carradyne thought again. There was a time when all that had to be done by hand. Miranda was looking at him, waiting. Maybe he should sit back and let them play with their toys without his help. "Just get us a general idea," he said, knowing it sounded lame.

Miranda fiddled with the dials and keys, her fingers deft and fast. "There."

Out of nothing, the display created an oval-bodied, long-snouted cone reaching backward at a slight angle to the approach path of the probelet swarm. Maybe a tenth of a degree. Head cocked, thinking with care, Carradyne matched the cone's axis to the path of the particle shower. "Guess you're right," he admitted. "So we find out if anybody noticed it here. *If* we had it here. You're sure none of the other probelets caught it?" He looked around. Mute faces looked back at him, offering nothing.

"Fair enough." He lifted an eye to Habash. "Meanwhile, this isn't what you got me out of bed for."

"This came up after that," Habash explained. He turned to Miranda. "Put a team on it. You pick 'em, but might best include Jason, here. And Shiro. Set up the catalogs and key codes. Now—" His sad eyes came back to Carradyne. "Let's go look at the flowers."

* * *

Patiently, carefully, a gardener was pulling weeds one at a time, zapping them, macerating and scattering the remnant shreds around the peonies. A servitor, it had eyes but no ears—none on the specifications, anyway—which was exactly what Carradyne wanted now. Human business, this was.

"What does he know?" he asked.

Fred Habash scuffed a clump of grass that had bunched up between the flagstones. "He started asking about the signal recovery. The first time. Yours. He asked Mikhail to start with and got nowhere. Then he tried Juan Carlos, who really didn't know, of course. Finally he got bucked up to Henry, who knew enough not to say anything, and as soon as he could Henry called me."

"What sort of questions?"

The gardener pointed its zapping finger at a glossy green beetle that clung to a peony stem, gave it a shot, brushed away the blackened scrap. The stem wasn't singed.

"Well, the way he put it," Fred said, "he was wondering if anyone had matched the transmitter background noise from before the loss of signal event with the signals that came after you discovered it again."

Carradyne had been moving slowly from flagstone to flagstone, careful not to crush the grass under his city walkers. Now he stopped. "Right question, all right. Should've done it. Didn't think of it at the time." Thumbs in waistband, he gazed out beyond the garden to the green spread of lawn, the sky with its clean white puffball clouds. A circus-striped aerostat floated across his line of sight, following the beltway, snarfing

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the stirred up particulates out of the air. "What answer did he get?"

"The minimum," Habash said. "After all, that was, what? Sixty years ago?"

"Sixty-eight," Carradyne said.

"Yeh. Well, none of us was here that long ago. Nobody remembers."

"Nobody but me," Carradyne said, feeling grim.

"Nobody but you. I told him you weren't available just now. He didn't like that, but I stiffed him. Then I told him the history doesn't mention anything like that, but that if the signatures had matched there wouldn't need to be a mention, and if they hadn't matched it probably wouldn't mean anything because we thought the signal had been lost originally due to damage to the probe or maybe a malfunction, either of which would change the signature after the onboard brain made repairs. So the history might not mention it in that case, either. Besides which, what else could the signal have been coming from?"

"Thin ice, there," Carradyne said. "And the fact is, nobody thought of it. Nobody checked." He paused where a thistle, half a meter tall, poked its head out from among the peony fronds. He cocked a glance back toward the gardener. "Hey. Missed one," he crowed.

Without a break in its activity nor any other sign that it heard, the gardener snatched a tuft of crabgrass from the verge, chomped it, and smoothed the disturbed soil. Continuing the snakelike writhe of its arm, it took a dandelion ready to blossom, roots and all, from its concealment under the fringe of an evergreen.

"Seemed like a good way to find out if he knew anything," Habash said glumly. He looked away from Carradyne's gaze.

"And?" Carradyne asked. The sun burned warm on his shoulders.

"He said, 'Pathfinder.' Just like that. And then he said—" Habash's voice changed pitch and intonation. " 'The one that showed there really is an Oort cloud out there; you know, where all those comets come from? It had to be shut off so it wouldn't interfere with signals from the probe. Remember?' " Habash shuddered. "I remembered all right."

Though inwardly he felt chilled, Carradyne chuckled. Getting interesting. "Did his homework, sure 'nuff. Or listened at the right time in the right place. And you said?"

"Told him I remembered, now that he mentioned it." He smeared an anthill with his heel. "Before my time, of course. Before everybody's. And I told him that actually it had showed there really wasn't an Oort cloud in the sense of all thosee protocomets being in orbit around the sun, way out there, but just a lot of modest size accretionary bodies out there all the way to infinity and moving more or less randomly in orbit around the galactic center and. . . ."

"Trying to change the subject?" Carradyne asked.

"I was then. Didn't work. He asked if we checked Pathfinder's transmitter noise signature, and maybe did that one match the signals we'd started getting again? I reminded him Pathfinder was shut off, so then he asked if it could have been turned on again. I said I didn't know. I said we'd have to check and

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maybe the answer would be there and maybe it wouldn't. I said we'd have to talk to you; maybe you'd know. And he said talking to you might be a good idea and when could he have an appointment. Well, I explained you'd gone home for some sleep, and an appointment might take some time to set up, and. . . ."

Listening with half his mind, Carradyne watched as the gardener scuttled —furtively?—along the edge of the flower bed to where the thistle stood, pulled it from the earth, shook clods from its roots, shredded it and zapped it to smoking ruin. Almost sedately it returned to where it had been working. Carradyne grinned. Did it think he hadn't seen? Did it care? Was it telling him something?

"So then you got me out of bed."

"I got away from him, yeah. Shouldn't I have?"

"You should have. No argument there."

"What do we do?"

Carradyne turned mild blue eyes on him. "I'll have to talk with him." He sounded almost serene. "Pass the word—don't tell him yourself—I'll meet him in the Exhibit Hall. Maybe I can show him a thing or three."

"You think so?" Waving off an inquisitive bee, Habash stood his ground. "What will you tell him? What *can* you tell him?"

Carradyne chuckled low and hearty. "Why, the truth. What else? Except we don't know the truth."

"And he'll believe that?"

Carradyne's chuckle became a laugh. He cut it off. "A man who's made his career not believing what he's told?" His hand chopped down in scorn.

Off in a corner Farrell and Darvas were arguing, as they had for months, over how a star of point seven-plus solar masses could have five terrestrial planets. Each had a fresh sheaf of printouts in his hand with which he gestured and which occasionally he deigned to look at. Neither appeared to be making much headway.

Faced toward them, back to the doorway through which Carradyne came, Willyum Best was ostensibly looking at one of the displays. Epsilon's innermost world as it happened, with its astrobleme-pocked flood basalt plains and its rift like the parted lips of a lover, and from offstage reaching toward it a gigantic, ruddy, shimmering prominence from Epsilon itself, a serrate reptilian tongue about to lick its face.

Carradyne made his walkers squeak on the floor tiles, not an easy thing with the waxes used nowadays. Hearing him, Best turned around.

"Trying to collect some bits and snippets?" Carradyne asked.

Best's bright-eyed smile was unashamedly self-satisfied. "Local color. One does what one can," he said sweetly. The piplight on his foulard's stickpin gleamed bright emerald; doubtless his remote voice pickup had been tweaked up all the way.

Well, between those two he'd get nothing but confusion. No half truths taken as whole. "You wanted to see me?" Carradyne asked.

"I want to talk with you, Mr. Carradyne." His voice was controlled as only a man long trained at using his

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voice as a tool could control it. Warm, mellow tones mellifluously spoken, belying the mind that controlled his tongue. Handle with care.

Darvas and Farrell had seen Carradyne enter and had edged out through another door, still waving printouts at each other. In lieu of swords, Carradyne thought. So they did notice other things! "Let's wander around," he said and with a measured, casual pace steered Best toward the Planet Two exhibit. Cloud-wrapped, this one, though here and there narrow openings like thick-lidded eyes offered enigmatic glimpses of dark, misty voids below.

"You know we've been releasing information just as soon as we know what we've got," Carradyne said. "More than you people can use. At least, you don't."

When he wanted, Willyum Best could look like a particularly innocent cherub. Bright, bumptious, cheerful and naive. He looked that way now. "What we're looking into isn't a thing you'd want asked at the press briefings, Mr. Carradyne. No indeed. We've—my staff, that is, and I—we've been going over the mission history. There's some very remarkable oddities. Can we, uh, talk?"

With a nudge of his thumb, Carradyne indicated the exhibit. Planet Two slowly turned as if to have just noticed them. All those eyes. "If there's life anywhere in the system, that's where it is," he said. "Those clouds are water. That air has free oxygen; not much—about 5 percent—but some. We're looking close. So far, no other indications."

"I said, can we talk," Best said.

Carradyne moved back a step, waited.

"This is a multinational facility with charter from seven nations and presently receiving public funds from six," Best said. His smile was still there; the smile of a man honing his knifeblade. "To hold back information could have serious consequences."

"Can't hold back stuff we don't got," Carradyne grunted. He gave Best a long, steady look. "Questions, now. . . . Questions we've got plenty of. Delighted if you'd take a few off our hands."

"Can we talk?" Best persisted.

Carradyne poked an index finger at him, stopping it less than an inch from his collarbone. "First let's have some ground rules. You want to record, I'm assuming." His finger strayed toward the spark-bright stickpin; not even the courtesy to ask permission, he thought, even as his tongue pressed on. "That's fine with us. We'll make copy, too. Winstead, are you listening?"

"Have I ever not?" Winstead's voice seemed to come from all around them.

"Just stay with us," Carradyne said. "Keep everything, visual context included." Back to Best then. "We'll want a full copy of yours. It had better match ours. Any parts you intend to put out you'll supply as packaged for advance review. We'll have the right to concurrent factual response under the equal time rule. Any objection?"

"Objection?" Best managed to look surprised, innocent. "Well, we'd want arbitration in cases where things aren't clear-cut, and—"

"Things never are," Carradyne said.

"—and for the rest, really, we hardly need reminding what the laws require. We're in the business. Aren't you being premature? Usually we find that people

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who bring up the legal aspect have a reason they're, ah, not proud of."

Carradyne had let his gaze stray toward Planet Two. Beautiful, those swirls of whiteness. All those mysteries. Slowly he turned back to Best. "We're in the facts business here," he said. "Facts. We want to be sure that's what you get and what you put in the channels. All right?"

"Ah, but what *are* the facts?"

"The facts are we don't know if there's anything alive down there. We'd like to know, one way or the other. We're looking. All we've got is the data coming back from the probe. It's too late to have it look for something it hasn't already seen. It was too late already when contact was regained."

Best's glance at Planet Two was indifferent, casual. "That would be the second recovery of signal, I presume."

Drawing breath to reply, Carradyne stopped himself. You don't wiggle it out of me that easy, he thought. What he said was, "Have we got the rules?"

"Of course," Best said. "Did I imply we did not? I'm sorry. Really I am."

"Winstead, you've got that?" Carradyne asked the empty air.

"Memo waiting your signatures," the emptiness replied. Was there, in Winstead's voice, the echo of Best's wounded innocent tone?

"On my desk," Carradyne instructed. "Make this permanent verbatim record, Winstead. No editing."

"I would not think of it, sir." This time the tone of injury was definitely there.

"You will now. Don't do it." He gave attention back to Best. "Now that we understand each other, what do you want?"

Best seemed almost not to have been listening. Half turned away, he contemplated the model of the probe on the other side of the long hall; the probe and its brood of probelets docked to its openwork frame like suckling young, one undocked and seeming to float unsupported beside it, its deep set multiple eyes looking directly back into Best's own. Watching? Best would never know.

When Best turned back at last, Carradyne had drifted on to Planet Three. Bigger than Earth, but atmosphere unaccountably thin; continental plateaus and dry ocean beds carved by deep subduction trenches and discontinuous midocean spreading rifts, all thinly mantled by carbon dioxide frost, white as bones except where volcanoes had stained it black and red and yellow green. Turning, the world showed a rift like a lopsided, big-toothed smile. Carradyne grinned back. Make him come to me, he thought.

"Now?" Best asked. He arched a cheery brow. "Let's see." He laid fingertips in the palm of his other hand. "My assistants and I have been studying the history of your probe. All of it. Not merely the information packets your liaison people prepared for us—useful, of course, but they leave out so much. No, we have researched on our own all the way back to the beginnings of the mission and beyond, public records made at the time and also some of the technical reports. Very interesting, those. We even found some copies of transmissions as they were received, before processing. Those we found extremely interesting."

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"Really? How would you know?"

"We retained consultants to do an independent analysis for us," Best said. "Would you agree that Heinrich Watanabe is competant? And Ukolu? He would understand such things, would he not?"

"*He* would," Carradyne said. "Would *you* understand *him?*"

"We can but try," Best said, so easily Carradyne was sure it had been hard. "Now, naturally we turned up some contradictions. That's to be expected in such a large undertaking. Trivial things for the most part, the sort of thing that happens when many individuals are handling large quantities of information over long periods of time. Memories are not perfect, even mine. Misunderstandings creep in and magnify each other. Those we are not concerned about. Those did not affect the broad outlines."

Planet Three continued to turn. Now, coming around the limb, appeared a scallop-edged blank space which the probelets had not scanned; an elongated trapezoid black as deep space. Here there be Dragons, Carradyne thought. Onward then came mapped terrain, showing on the trapezoid's far edge the outer three rings of a giant caldera almost a third of the world's face across. The geophysical people said there were two more rings enclosed within the outer ones, had to be, and that it was an impact structure rather than volcanic, though there were problems with both interpretations. Belly button, the technicians were calling it.

"So what did?" Carradyne asked. "You didn't do all that without a reason."

"Let's go back a minute," Best said. Again that smart, self-satisfied smile. "We had a man come to us. Oh, six months ago. Maybe longer. About the time your people started putting out the news that the encounter was about to happen and all your systems were cracking hot and ready. Rehearsals and all that. He, this guy, told an interesting story. He used to work on simulation displays, he said. Creative ones for entertainment media for the most part, but whoever wanted one, never mind who or why, he'd produce. So long as he got paid."

Belly button looked so real it took an effort not to think he could reach out and feel its rough edges. Carradyne's fingertips itched. He let a silence pass; more would come.

It came. "What he told us," Best resumed, "long time ago he had some people come to him. They wanted a solar system built. Simulated, that is, in a form for electronic transmission. Lots of detail, multiple channels, all sorts of things. And, this is the interesting part, not a solar system like our own. The sun would have to be a bit different, not as bright, and they gave him a whole swatch of paper with a lot of other specifications which he said he's still got somewhere but couldn't find just now. Packed away, he said. Anyhow, they left him the stuff and said they'd be back but they never did. And a while later—he wasn't clear whether it was months or years—he caught a mention in the news that the signal from the Epsilon probe had been reacquired—I'm not sure that's the word he used or whether we picked that up from the published stuff. Anyhow, he'd never heard of this Epsilon

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probe so he didn't think about it much at the time except that he noticed it was a star that wasn't as bright as the sun, maybe about as bright as this star these guys had mentioned. Well, he had plenty of other work so he mostly forgot about it, only now with this encounter as big in the news as it's been—century-long voyage and all that—he got to thinking. So now he comes to us and talks. Interesting, don't you think?"

Carradyne turned his eyes to him and waited. Interesting, that it was. Might even be true. "This the first storyteller you've had walk in?"

Best had the grace to chuckle. "We get two or three a week," he said. "The trick is to know wheat from chaff. I've seen some strange ones check to the last number, and some that should have we've had fizzle into gas. No way to be sure until you dig a little."

He'd been digging, all right. Slowly Planet Three turned, now revealing a rift valley that reached from within Belly button's outermost rim southeastward, as straight as if gouged by an auger. Only after a long held breath did it break into two branches and begin to peter out. Like the Red Sea, Carradyne thought, and wondered why its other end didn't point directly toward Belly button's epicenter. He wondered what had happened there, how long ago?

"You're telling me all this was manufactured," Carradyne said. His gesture encompassed all the displays in the hall. Planet Four, whose orbital plane sloped so radically to the plane of the others, looping down within a hairsbreadth of Planet Three's orbit, ascending again on the outside of Planet Five's, and its axis of rotation nearly perpendicular to the plane of the others, not its own. (Sign of radical perturbation? Happenstance?) Planet Five, a tiny rockball within an opaque thick atmospheric shroud. "Would anybody have rigged a solar system as crazy as this one?"

"I don't know, Mr. Carradyne," Best said, level toned.

Carradyne felt the taste of iron on his tongue. "Do you accept that all of this comes out of transmissions from the probe? From out there? That's something you can check for yourself. Have you done that?"

"We accept that it's coming from out there," Best said. "Where the transmissions originate, and what from, that's perhaps a little more difficult to be sure." And oh, that smirky smile.

Their silence stretched long; like fighters circling each other, each waited. Best broke first. "That's one line of information. The other's in the mission history. Shall we look into that just a little?"

"If you want." Stiffly spoken, giving nothing. At least this time he knew what was coming; but let Best play his own cards.

"We find two occasions on which the signal was reported, ah, reacquired. Only one on which it was reported lost. Care to comment?"

"Not right now. Let's have all of it."

"Wise, Mr. Carradyne. Wise. Well then, we have inquired from your historical section. They could not help us. Nothing in the records, they say. And, of course, no one here was here that long ago. No one remembers except possibly you. Correct?"

"When the signal got lost, I wasn't here either," Carradyne said. "Must've

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been in kindergarten about then. Have to count on my fingers to be sure. I was a kid. That much I'm sure of."

"But the reacquisition? You were in on that, weren't you?"

"In on it?" Carradyne had to laugh. "Sure was. Golden boy."

Between his first and second year at Tech, he'd taken a job with the Survey, the dull sort of job they gave students needful of cash for the next term and which also honed the skills learned in the term just ended. He hadn't planned on going that direction—communications was where careers waited—but it was work that paid and a lot of the technology was similar. Brain pounding work it was; though machines had marked every whisper of a signal, he had to check them all in his assigned patch of the celestial sphere to confirm that they came from natural deep sky sources.

In theory it should have been easy. Radio noise from the sun, from Jupiter and the planetary magnetospheres was known, almanacked, easily recognized and already filtered out. Man-made signals, staccato with byte-sized information, stood out from the cosmic background like flame in darkness and could be eliminated by the touch of a few keys. All the Survey wanted was the thin, steady hiss of cosmic sources and the flickering murmurs that spoke of strange happenings out there among the stars. For that, most of the time, it was enough to know that human-sourced signals tended to drift around the sky while cosmic sources held pretty much true. (Well, most of the time, and behind those migrant few waited another potential Nobel. Not for Marty Carradyne, though. For him it was a job, the crust of bread he needed for his next year at school.)

So it was he should have marked that particular signal as human sourced and routinely moved on to the next nanoarc-second of the scan. There was a hint of drift to it, sure enough, and definitely it carried information in standard binary digit form. He wasn't paid to think about things like that. All the same, he did think, and then he got up from his basement workstation and went upstairs to the library and wasted half an hour on something that had nothing to do with the Survey. Then he went down and took a printout and went all the way up to the eighteenth floor.

Jim Larrabetti scowled at the printout for a while. Turning to the keyboard at his elbow he punched up the display. He listened to its burble. After frowning for a time that seemed to the young Carradyne about three quarters of forever, he tried a few keys. After a pause, a few more. "It only shows on some of the tapes, right?"

"Just the ones after May fourth," Carradyne said. "On those it shows up every time."

Larrabetti's chair squeaked as he turned back to Carradyne. "Well, it's human to the nines. Not what we're looking for."

Something stubborn made Carradyne speak. "Look again. We've got seven scans that show it. They're spread over three months. It's stayed in the same position all that time. What sort of human signal does that?"

Larrabetti started to say something, then didn't. It wasn't one of the known fixed sources; Carradyne had made sure

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of that. Picking up the printout, the assistant survey director leaned back in his executive chair and thumbed his brow. "It's still human. All the signatures." His eyes swung to the young man in front of him. "What else have you got?"

What else Carradyne had was a page of scribbled notes. He passed it over. "Actually, there's some indication of drift. Not much. Less than resolution error, but . . . see for youself."

Larrabetti did. "You could argue that. Couldn't prove it without a longer time frame. Is it worth it?" Obviously he didn't think it was.

"I wondered where it was coming from," Carradyne said. "And what?"

Larrabetti had been about to hand the page back. Now he gave it another glance. "Little green men feeding us our garbage back?" With a touch to his keyboard he killed the display. "Every time there's been one like this, that's the first thing that's been checked. A hundred times, never a waver. Give it up. We don't have funding for this."

"It's the Epsilon probe," Carradyne blurted. "Got to be."

The surprise that flickered on Larrabetti's face faded slowly into skepticism. "That's been dead for seven years. Eight," he said. His teeth clicked as he gnawed the thought. "They quit looking for it . . . must have been three, four years ago. I know that work and I know those people. They did a solid job. You're saying they missed it?"

"It started transmitting again some time between April twelfth and May fourth," Carradyne said. "From its last known position it's drifted lateral about point oh oh one arcsecond. That's consistent with what I think it's drifting now. And if it's human, and it's out there, what else could it be?"

A humph came as answer. "Could be a thousand things, and you know it. However. . . ." He punched up numbers on his phone. "Back to your station. I'll take it from here. Not our assignment, but there's people who'll be interested. Might be, anyhow."

He was back at Tech when the reacquisition was announced. Speaking for the survey director (whom Carradyne had never met and now, to Willyum Best, could not name), Larrabetti claimed credit for the Survey and—grudgingly when the reporters asked—identified Marty Carradyne as the junior technician who had made the preliminary recognition. Carradyne knew nothing of it at the time, had mostly forgotten the whole business. The first he knew was when he came out of a classroom — Professor Dolph's seminar on practical nonsynchronous orbits—and blinked at the phalanx of cameras and men. Thinking it had to be for someone else (Professor Dolph most likely), he edged aside and started to squeeze past. A blond man with a thick mustache grabbed his arm and yelled.

For a few days, then, Marty Carradyne was famous. A little of it stuck. Scholarship money appeared from nowhere, so it seemed, and a meaningful job the next summer at Grote Reber Institute which included two weeks in orbit. His name opened doors. Senior professors took him aside and not so subtly urged him to sign up for their lectures. Department Chairmen nodded to him in the halls. Later came work on

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the Earth-Lunar baseline, and then the Trojan Interferometer. His life was made.

"What's that?" A bright spark in one of the cloud rifts on Planet Two had caught his eye. "Winstead, what's that?"

"The speculum of light, sir?" asked Winstead.

"That's the critter. Why wasn't it there before?"

"It has only now been confirmed, sir," Winstead explained. "Until now it was only one pixel from a single probelet's scan, therefore most probably a transient instrument error. Now we have an almost simultaneous scan from another probelet which flybied the planet several thousand klicks farther out. It has one pixel at three-fourths maximum and an adjacent pixel on the next line which shows partial brightening. The observation is therefore confiirmed."

Carradyne bent to peer more closely. It was still only a pinprick of light, slightly yellow-red, fixed forever in time and space by the probelets' eyes. "All right. What is it?"

"We do not know, sir. Further inquiry has been recommended."

"Do that," Carradyne said. "Thank you, Winstead." To Best, then, he said, "That's how it is in this business. We think we've got everything, then all of a sudden we don't and we're not even sure what we do have."

"The probe," Best reminded him. No curiosity at all. To Carradyne it was like being yanked back ten light years, almost a century of real time. For an instant he was not sure where he was.

"The probe," he said, and found his footing. "Launched from Moon orbit in seventeen, about nine years behind Pathfinder. Contact lost in year eleven of the mission, no sign of malfunction before it chopped off. All the post mortems could do was guess."

"My information is that it hit something," Best said.

"That's likeliest," Carradyne grunted. "Wouldn't even have had to be much. Something the size of a marble, ten or twenty grams, at the velocities we're talking about, wham and that's it. Like high explosive."

"Mind explaining that a bit?"

"Simple kinetic energy," Carradyne told him. "Any two objects that meet out there, each going its own direction, it's likely they'll be coming together at relative velocities measured in klicks per second. That's fast. Impacts like that, even if they don't make a wreck of things, which they probably would, they'd send the craft tumbling and then it's sometimes quite a while before it gets itself stabilized again and the antennas pointed right. So maybe that's what happened. Nobody knows for sure."

"What do you think it hit?" Best asked.

"Sorry. No witnesses. According to Pathfinder, there's a lot of cometary material, meteoroids and suchlike, scattered around out there. The probe's transmissions say the same thing. Plenty of stuff for it to hit. So it's as good a guess as any, but a guess ain't information."

"You think that's what happened?" Best said. "We'd like an answer, Mr. Carradyne."

"We don't know what happened," Carradyne said. How did you explain

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uncertainty to a man like that? "All we're sure about is that the signal cut off and we got nothing more until I picked it up eight years later."

The model of the probe bulked huge in the hall, its body a long fleshless skeleton of burnished girderwork, boom-mounted sensors and transmitters and maintenance machinery, and huddled within, thickly hulled, the power cells, brain units, Sagan package, and spare parts stores. With its clinging brood of half a hundred probelets, more than anything it looked like a giant carniverous insect pinned to a museum mount for the enlightenment of dwarves. The real thing, Carradyne reflected, was a hundred times bigger. Ozone and machine oil tanged the air. Little piplights glittered. Hard to believe that anything could have happened to it.

"Sort of a final effort, wasn't it?" Best asked.

"The last one we had," Carradyne said, glum. "The only one launched. Any idea of building another, even after it got lost, got ate up in the cost overruns on the Moon burrow and the Mars Permanent station." He let his eye run down that long immensity.

"Mars," Best said. "That's the one that got abandoned finally. Right?"

Carradyne nodded, waited.

"OK," said Best. His hands came together in a soundless clap. "Now, about the probe. My staff has produced a fairly comprehensive report about how things stood at the time. Right then the mission had just twenty-seven persons on its payroll. Some of them were part-time, and the number includes Mission Director Sandor Andresson. It was a monitoring operation by then—systems checks and data acquisition and an occasional new instruction being sent after it. It was, I believe, approximately a light-year out when contact was lost."

"A bit less," Carradyne said. "Close enough. Accelerating at about point oh one gee."

"Fine. Now, Sandor Andresson was appointed head of the mission a few months after the launch when there were almost a thousand people working on it. Eleven years later, with only a fraction of that staff and less than 5 percent of the budget, he was still drawing the same stipend he'd started with plus cost of living increments. Right?"

"Better ask Winstead," Carradyne said. "I don't keep track of that sort of thing." He raised his voice. "How about it, Winstead?"

"Essentially correct, sir," Winstead replied with the crispness of ruffled feathers. "His expense account was eliminated after the first four years."

A slight movement of Best's shoulder put aside the correction. "Nice money, don't you think?"

So that was the drift of it. Carradyne turned. "Money's all that matters to you, right? Never any sense you're doing a thing worth doing? That it's the most important thing that's been done since the first fish crawled on land? You don't see that, do you?"

"I'm saying it was to his personal advantage to keep the project going, even after the signal was lost."

Carradyne snorted his contempt. "He had to work three times as hard for his budget. Doesn't that count for something?"

"Not if a large part went into his own pocket," Best said with a sly twinkle.

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"And sort of late to bring up a thing like that," Carradyne went on as if Best had not spoken. "He's been dead for something like sixty-five years."

"Mr. Carradyne," Best said, all at once very severe, "do you deny that the signal you recovered was not from the probe? That it was Pathfinder? And that the deception has been maintained ever since?"

Carradyne swung his glance down the hall's row of worlds, all strange, all different, foreign. "Those didn't come from Pathfinder."

"Ah, but where *did* they come from?"

"From Epsilon," Carradyne said. "By way of the probe."

"In view of my information, you expect me to believe that?"

It took a shift of mental gears, from patience with a scale of values not his own to cold anger. "You're saying they're a fabrication. A fraud. Well, friend, they're not. If that's what we were doing, we wouldn't be showing you this bunch of oddballs. We'd give you something more believable. And if your people were doing their job, they'd tell you these came out of the data stream we're getting from the probe."

"I have confidence in my staff," Best said, calm as oil. "These images you've put on display come out of transmissions received from the general direction of Epsilon, true enough. The question stands, where did they originate?"

"From Epsilon. The probe."

"Not Pathfinder? You're sure?"

"Where would Pathfinder get them? Make them up? Its brain doesn't have the capacity. No brain does."

"I'm thinking about that simulation designer," Best purred. "Couldn't a simulation be sent out to Pathfinder with instructions to feed it back? That's within the capabilities, is it not?"

Wrong-headed as trying to crawl with your eyebrows. Carradyne moved his weight, took a breath. "Doing that would take a bigger effort than we've got here now, rolling up the stuff that's coming in and keeping track of it all. If you think that's what we've done, go find the people that were doing it."

"I don't have to do that, Mr. Carradyne. It's up to you to prove it's not what was done."

The absurdity of it, in other circumstance, would have made Carradyne laugh. Prove a negative? "I do not beat my wife," he said, one flat, level word at a time.

Winstead spoke. "May I intrude, sir? It concerns the present matter."

"I can use all the help I can get," Carradyne said.

"Thank you, sir. Mr. Andresson went on half salary when the signal was lost," Winstead said. "Also, you may be interested to know it has been noted that the middle ring of Planet Nine, number three of the five, is predominantly silicate material while the others are various ices. There is some suggestion of differential fractionation. Further data is being sought."

"Who'd have thought it?" Carradyne asked the air.

"It was totally unexpected, sir," Winstead answered.

"Thank you, Winstead." He turned to Best. "Where was I?"

"That would have been more incentive for Andresson to recover the signal, don't you think?" Best said.

"I think he wanted to get it back,"

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Carradyne said. "The facts are he tried for three years and didn't get it. He resigned, and what was left of the effort was absorbed into the Outer Planets Survey. That bunch kept it up for a while, sort of halfhearted, but after they'd futzed around with it a couple of years they walked away from it. Not what they were interested in."

"He had a stroke about then, didn't he?"

"That was after he resigned. Give it up. The mission was what kept him alive. When it went, so did he."

"My information is that he was still alive when you made the recovery."

Carradyne nodded. "That's right, but not by much. They took me to see him in the maintenance center. Part of a public relations thing. The machines they had him plugged in to looked more alive than him, except maybe the eyes. He couldn't talk, but I think he understood things. He still had a strong hand. I remember that."

Best's fingertips waved the information away. Extraneous. "What did the signal you recovered come from?"

"Pathfinder." It grudged him to admit it. "At the time, we thought it was the probe. Everybody did." He shook his head. "Pathfinder."

"Ah," said Best, well satisfied.

While they talked, Carradyne had strolled down the row to Planet Nine. Ring number three looked no different from the others. Farther out seven moons, none bigger than a marble, slowly orbited the world; two also orbited each other, almost touching. Who'd have thought it? Impossible.

"Maybe I'd better expand on that," he told Best. "Pathfinder got turned off when its transmissions started to interfere with the probe's. It had been sent out along just about the same track as the probe, toward Epsilon. By the time I picked it up it would have been at roughly the same distance in the same line of sight. I was a dumb kid back then. I figured it had to be the probe and nobody second-guessed me. Why should they? Everybody knew Pathfinder was shut off. Me, at the time I'd hardly heard of it."

"How do you account for it getting turned back on?" Best wanted to know.

Still contemplating Planet Nine, trying without success to imagine its true hugeness, Carradyne replied almost absently. "The mission had a lot of commands sent out after the signal got lost—the probe's signal—trying to get it to come back on. Exactly what was in them we don't know. We've found copies of some, but there's lots we didn't. Pathfinder would have been in the same beam path. If it picked up one of those commands, if it wasn't written specifically enough, maybe that made it come back on. It's possible."

As he spoke, pretending a casualness he did not feel, he turned to face his questioner. He did not like what he saw, that smile like a ferret glimpsing prey.

"And is it possible," Best asked, "that the commands were deliberately written so that it wasn't specific enough?"

"It's a theory we don't need," Carradyne said. He kept his voice steady, firm.

"But isn't it possible?"

A small, small-minded man, this Willyum Best. Carradyne let him wait for a reply. "We've covered all we

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know without having to invent that. And if you'll remember, by the time I picked up that signal Sandor Andresson was down with a stroke and the mission was out of business. Nobody left to make a kroner off it."

"Wasn't there a new establishment set up as soon as you got the signal?"

Carradyne snorted. "If you call two years immediately. It took something like that. I wasn't involved much. I was still in school, remember. When they did get it set up, it wasn't anything big—maybe that's why nobody thought to check what was sending the signals. I don't know. In any case, I didn't come to work for the mission until seven years ago, after they picked up the real signal again. The one from the probe."

"So you deny any involvement," Best said.

"I wasn't involved," Carradyne said. "Back then I was just a kid. Later I was working other jobs. Ask your staff. They should have a big thick file."

"They do, Mr. Carradyne." Yielding the fact but not the argument. "Some of those jobs were not entirely unrelated."

Planet Eight, the largest of the gas giants, its bloated roundness a beachball fury of cloud bands and storm whorls. An extended atmosphere and powerful magnetic field, but not one ring, no moons. No reason why. Questions. Questions. Hard to think of mundane things in such a presence.

"All right," Carradyne said, making himself turn back yet again to this persistent little man. "Some mistakes got made and some people benefitted. It doesn't matter that Pathfinder was sending back useful information—pretty much the same information the probe would've been sending back if it was doing the sending. The interstellar medium is pretty much the same everywhere in this general neighborhood. At least that's what we think. And until the probe came back on it was the only source of data we had. It wasn't a very big team, either. Eight people for most of it, and some of those were half-time assignments. For the big conspiracy you're talking about, that's pretty small time."

"It's a matter of intent we're thinking about," Best said. "Our theory is that Sandor Andresson and possibly some of his associates, when they concluded that the probe was lost, deliberately stimulated Pathfinder to begin transmitting again, this in the hope it could be passed off as the probe. You'll remember, I presume, the information it was sending back was ambiguous on the point."

"Data on the interstellar medium? Sure it's ambiguous. Pathfinder's data would look just like the probe's. Same instruments down to the nines. Among other things, Pathfinder was a test of those instruments. If they hadn't worked on Pathfinder, they wouldn't have flown on the probe."

"And no other information at all? Nothing about condition of equipment? Surely that would be valuable information."

"Right. But it wasn't sending. We don't know why. We assume it was a malfunction. Remember, there was a big gap between the time the last command went out from the mission and the time Pathfinder started transmitting. Not just the year it took for the message to cross the distance. We think it must've

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took some damage between the time it got turned off and the time it came back on—what from, we don't know. Damage that took a while to get fixed. When the new group came on the job they tried to beam some queries. All they got was acknowledgement. Null data."

Planet Eight's enigmas still pulled at him. Maybe—was it possible?—the extended atmosphere had snarfed up all the moons it might have had, all the material that might have coalesced into rings. He'd have to ask Winstead if that had been thought of. Didn't seem quite reasonable, but Planet Eight didn't seem quite reasonable to begin with.

"Our reconstruction of what happened," Best said, "is that Andresson's attempt failed because Pathfinder's response was unaccountably delayed. At that point he was forced to resign and the mission was dissolved. You, then, stumbled upon the response when it finally came, at which point it was to the advantage of many people to pretend it came from the probe. What they actually believed we may never know. You have a comment?"

"Just that it's not the way I saw things happen," Carradyne said.

"But you have admitted, have you not, that you were naive in those days." Best's bright eyes turned sly. "As we see it, then, a new group was established which had a powerful interest in it being the probe. The same group, I would point out, of which you are now the director."

"Three-quarters of a lifetime later," Carradyne said with an ironic smile. "And they had to drag me back in from the pasture."

"Retired from a distinguished career," Best said, managing to sound as if quoting from a disbelieved press release. "Interesting, though, that only weeks after you assumed the directorship the announcement came that signals from the probe had been detected. As if they had not been coming without interruption for approximately seventy years. As if that was forgotten. We think that's strange."

"Well, far as the general public was concerned, it *was* forgotten." Carradyne poked a finger into the blur of Planet Eight's outer atmosphere. Like feeling a wisp of smoke, he thought. Nothing. "Understand, until just before they brought me in, the mission was just a monitoring job. They'd noticed Pathfinder—they thought it was the probe—they'd noticed it wasn't going fast enough and hadn't gone far enough to be any place near Epsilon. Long ago they'd noticed. They thought it was because the probe's jet was stopped, damaged the same time as the signal got lost, maybe. So they were just collecting data on the interstellar medium, which didn't change much year to year. Six or eight people, and a lot of turnover in the staff because maybe it was good training, but pretty dull work."

"Your point is. . . ?"

"My point's that no one but people working on the mission and a few research people using the data knew a thing about it. Hadn't heard of it, even. So when they came to me—"

"Why? Why did they come?"

"Pathfinder didn't have a permanent power cell. Its signal had been fading down and down—doing that for years—and they'd been tweaking up the sensitivity and then tweaking it some more,

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and something started mixing with the signal from a source maybe two or three nanoarcseconds away from its position. I'd done some work on multiple source signal discrimination back in the fifties and I wasn't doing much of anything else, so they sent a guy asking me to troubleshoot. Maybe they remembered I'd had something to do with the mission before, maybe they didn't. I never asked. Well, between us we got it sorted out, and the other source was the probe, nicely on course and about seven years from encounter, and no way to know how long it'd been transmitting before anyone noticed."

"And suddenly you were mission director."

Carradyne scowled up at Planet Eight's huge bulge. "They needed a front man." Possibly, if some time in the past the world had expanded its atmosphere, swallowing up its rings and moons, that would explain their absence now. But what could have made its atmosphere expand? Some change in its core temperature (caused by what?)? Could Epsilon have gone through a period of heightened flare activity? If so, how long ago? Questions. Questions. "I was there on the scene already. I had the credentials. I didn't need the job. They said the job needed me."

"Interesting that you should be involved in the recovery of signal both times, don't you think?" Something snide in the way Best said it.

"Yup. Sure is. You ever have a dumb thing you did when you were a kid come home to roost on you?"

"Not that I can remember," Best said.

Best's kind never did have good memories. "Now here's something interesting," Carradyne said. "If I hadn't made that mistake—if I hadn't picked up the Pathfinder signals and thought they were the probe—maybe somebody else would've noticed, maybe not. But if nobody noticed, when the probe did start transmitting again, there'd have been nobody watching for it. That signal was a teeny whisper. Wouldn't have got anybody's attention without help. If I hadn't picked up Pathfinder and if I hadn't jumped to the wrong conclusion—" His outstretched arm encompassed the whole exhibit hall. "If I hadn't, we wouldn't be getting all this."

Best's glance was casual, unimpressed. "What about our simulation designer? Where does he fit?"

"Who says he fits?" Carradyne wanted to know. "You're telling me about him. Sure you didn't make him up just to get me talking?"

He saw the shot go home in Best's innocent blinking eyes. But Winstead spoke. "May I speak?"

"Sure," Carradyne said. "You've got something?"

"Sixteen years ago, when it appeared our probe's effort was a failure, an outside group tried to organize another attempt. There was some communication with us. Among the things they planned was a public media presentation which would include the display of an exotic solar system as an example of the rewards to be achieved. The effort did not get very far. Some large egos were involved. They fell to squabbling among themselves. It is possible they consulted a simulation designer as part of their enterprise before it collapsed. Could this be relevant?"

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Best looked as surprised as Carradyne. "How about it?" Carradyne asked.

"Names?" Best uttered.

"Lothar Briggs was the one who talked," Winstead said. "Maxwell Chin and Seymour Slochauer came with him. They mentioned other persons. Guinevere Hamilton and—"

Best put up a hand. "That's plenty." And to Carradyne, "You know any of those people?"

"Crossed paths with Slochauer once. Surprised he let somebody else do the talking. Maybe that's why they didn't hold together."

"When?" Best demanded. "Was it about this business?"

Carradyne had to think. "Must've been, oh, twenty, twenty-five years ago. No, it wasn't anything to do with this. I don't even remember what it was about. Might've been . . . yes, at a conference. We were planning the Saturn Equilateral Baseline Array. He wanted to run the program and nobody else wanted him to. Far as I know, Epsilon didn't even get mentioned."

Best looked displeased. "We'll have to check all this. If it doesn't confirm. . . ."

"You can be sure that it shall," Winstead offered. "And sir, you'll be interested in the storms near Planet Ten's north pole."

"Thank you Winstead." Storms? On a world so far out from such a dim bulb star? What could be making storms out there? He headed down the line for a look. Best scurried after him.

"More stuff coming through all the time," he said. There were three storms, almost symmetrically positioned. Phase-interface storms. What gas-liquid disequilibrium could be driving them?

With only the quickest glance at the world, Best got around in front of him. A taller man would have blocked Carradyne's view. "So you would say the simulation designer had nothing to do with. . . ." His gesture included everything in the hall. "With any of this?"

"Not a thing," Carradyne said. He set his feet a little farther apart, tested the slightly soft feel of the floor tile under his walkers. "Now let's get some of what we've got into a time frame we can make sense of. First off, some time between our loss of signal event and the time we started picking up the signals seven years ago, the onboard brain must have made the repairs or reoriented the craft or done whatever needed doing so we'd get the signal again. You follow me so far?"

"I'd like to know what you're trying to establish, Mr. Carradyne," Best said.

"We'll get to it. The next point, Epsilon's just short of eleven light years from us. We started getting signals from the probe about seven years back. That means that in real time, when we started picking up the signals, the probe had actually gone past Epsilon already. The encounter that we're getting all this stuff from had already happened. Got that?"

"I still don't understand what—"

"I'm not finished," Carradyne said. "There's a lot of things we'd like to know that we don't. We've beamed out a whole stack of queries and commands to the probe, aimed to intercept where we figure it'll be about four years from now. It'll take the probe another eleven years to get its answers back to us. If it's got answers. If it hears us. If. If.

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If. One of the things that means is that there hasn't been time for us to have sent out a pile of garbage for the probe to send back to us. It wouldn't be coming back yet."

"But Pathfinder," Best objected. "If it's Pathfinder. . . ."

"Pathfinder's a lot closer, yes. And it's still sending. And if it was Pathfinder, the back and forth time wouldn't be as much." Carradyne let the information settle, then resumed. "This stuff isn't coming from Pathfinder. We've got a good parallax fix on where it is coming from. The Saturn baseline's confirmed it down to the nines. You can have your own people check it. They won't get a different answer. What we're getting is coming from Epsilon's distance and direction. Fair enough?"

"Indeed we shall have our people check it, Mr. Carradyne. We'll need access to the Saturn baseline, of course, and—"

"You'll get it," Carradyne said. "You'll find it's got a good track on Pathfinder, too. And when Saturn confirms it, you'll take it? You'll give us the fact?" He waited. Best didn't reply. "Will you?"

Best struggled. Doubt was a new thing for him. "If there are no discrepancies."

"You want discrepancies? Here's a beauty. After we figured out what had happened instead of what we thought happened, my mistake with Pathfinder and all that, I ordered some checking done. We matched the Pathfinder signals we'd been reading against pre-shutdown signals which we knew came from Pathfinder, and we matched the signals we'd started getting from the probe against the archive records from before the loss of signal event. We also matched probe to Pathfinder, before and after, all the combinations. We took a long hard look at the transmitter background noise signatures, which as far as I know nobody had done before. Maybe you picked up some rumors about all that. I'd be surprised if you hadn't. You know what we found out?"

"Suppose you tell me, Mr. Carradyne."

"We found that nothing matched. Pathfinder before and Pathfinder after didn't match. Probe before and probe after didn't match. Probe and Pathfinder didn't match, before or after. Nothing matched. Nothing."

"That's supposed to mean something?"

"Maybe." Carradyne calmed down. "Depends who's got your ear. The conservative idea is just that the original transmitters on both got disabled somehow, and the onboard brains repaired them. That's enough to have altered the signatures, and the bigger the repair job, the less similarity in the signatures, so it all hangs together and makes sense."

"But you're suggesting that's not what happened."

"I'm saying it's the likeliest guess about what happened, but there's some of us who don't like it. They think it's funny that both of 'em took heavy damage. They say, empty as space is out there—and believe me it's empty—how come they both take damage and what's more, they take it in the transmitter which is located pretty far back in a protected part of the platform? Something to think about, huh?"

"So?"

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"So maybe it's not all just chance," Carradyne said. "Maybe there's somebody out there. Maybe somebody happened on the probe and saw where it was going and what it was going to do. And stopped it. Shut it down. Maybe pricked Pathfinder into picking things up again. Maybe stuck with the probe and when it got close to Epsilon switched it on again and ran it past and showed us only what they wanted us to see. Or maybe showed us a fabrication that's got nothing to do with what's really there." He looked at Best, grinned. "You like that? Isn't that your kind of story?"

Best's gaze was steady, measuring, silent. When he spoke, it was no answer. "What do *you* think, Mr. Carradyne?"

"I think I don't know," Carradyne told him. "I don't like it. Too much invention. Too much just suppose. Not enough facts. And it's too much like looking under your bed every night. Ever think you're being followed, Mr. Best?"

"Frequently," Best said. "Over the years I've made enemies. I'm very proud of some of the enemies I've made."

"So you know that way of thinking better than me. I hope you know it's a dangerous way to think."

"Prudent," Best said. "Only prudent. But, also, neither here nor there. We'd like some answers, Mr. Carradyne."

"Answers we don't have," Carradyne grumbled. "This idea, if it wasn't for one teeny piece of information, I'd say it was twisted all out of shape. Here, I want you to see something. We haven't made this public because we're still trying to figure what it is. Winstead, could we have that series?"

"A pleasure, sir." Where Planet Nine had been, abruptly, was a window into darkness. Somehow it seemed to reach deep, all the way to infinity, and they were falling, falling, falling. A scatter of bright stars, some near, others farther away. Insubstantial as mist the faint glow of gegenschein. In the foreground, along the view's left side the probe's long skeletal flank, foreshortened, stripped of its probelets, was shown dimly lit by a source offstage. "To the right, high up," Carradyne said. "See it?"

Best peered upward. In the window's upper right hand corner, for a moment, something snakelike caught a glint of light. Segmented like a bicycle chain, ribbed like a string of vertebrae, supple as rope. Like a sine wave it rippled and disappeared out of the frame. No matter how many times he'd seen it, Carradyne felt a chill.

"Let's have it again," he said.

"Happy to, sir." The scene repeated.

"That's from a probelet in the second after it undocked from the probe," Carradyne said. "That wiggler thing shows in seven frames. We don't know what it is. Lots of ideas. No facts. All we're sure is that it doesn't look like anything that was aboard when the probe was launched."

Best turned from the view. "What sort of ideas?" he finally asked.

Winstead repeated the sequence. Carradyne waited until it was done.

"The probe took some damage," he said. "We think it did. Maybe that's a piece of damaged equipment we haven't

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recognized. The light's bad, and if the damage was just right, maybe we're seeing more than's there."

"Plausible." Best wasn't persuaded. "What else?"

"The onboard brain had a lot of repair capability. It had raw materials, fabricating equipment, spare parts, a memory crammed with every improvisation the people who built it could think of. Now, we think there was a lot of damage. Had to have been. Enough that it took seventy years to fix. Seems reasonable, we're thinking, the onboard had to build some things so it could do the repairs, things we can't really imagine too well because we don't know what it had to repair and we don't know how it was thinking. What we've got there—" His thumb tipped toward the view's upper right hand corner. "What we've got's just a glimpse of something that's bigger and a lot more complex. We're like the philosopher that sees a pearl and somehow has to work up to the oyster that made it."

Best touched his upper lip, tilted his head, calculated for a while. "But you don't believe that one, either."

Carradyne shrugged. "If those boys out there were really smart, they wouldn't have let us see that. On the other hand, it's a natural impulse. At least, it's a natural *human* thing to do, only now we're not talking about human people. Maybe it's saying, 'Look folks. We did this.' Mind you, I don't say that's what we've got here. I don't know what it is. It's as good an explanation as any other we've got."

"And what *do* you believe, Mr. Carradyne?"

"I believe we've got to get more facts," Carradyne said. "First we'll have to go through everything we've got from the probe. Every byte of information, piece by piece, but it's my guess there won't be anything there. We'll have to look at everything upside down and sideways and hindside out. And we won't find what we're looking for. That's my guess."

"So?"

"We'll need another probe. Better armor on essential systems. All the blind spots plugged so nobody can sneak up on it. New instructions on what to look for. Maybe a pair of probes, so they can look out for each other. It'll take a lot of planning and a lot of patience, and I'm not sure a second try will get us anything more than the first. But that's what we've got to do. No two ways about it. Got to be done."

He waited. Best Waited. They studied each other. Waited.

Best outwaited him. "You, Mr. Best," said Carradyne. "You're going to help us."

"Only one way to stop a scalp hunter like that," Carradyne told Fred Habash when Best had gone. "Throw 'em something bigger to chase after."

Habash turned solemn eyes from the view. The snaky whatever-it-was wriggled sidewinder-wise out of the frame. "It's going to be trouble," he said. "For a long time to come. Trouble." Then, "You didn't mention the other thing it could've been."

The day shift was knocking off. The night staff was coming in. Darvas and Farrell parted, still in dispute. Someone from Noise Analysis paused to look at Planet Seven, reached out his hands as

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if to hold it between them. His. Janet Potter waved as she went past, a thick sheaf of printout under her arm. Carradyne stuck a hand in his shoulder bag, toyed with his string of credit discs, wished they still made pants that had pockets.

"That the onboard that made it up?" he asked.

Habash looked at the model of the probe for a while. Silently one of its eyes turned to meet his gaze. For the space of a breath they held, then Habash looked away.

"It's as possible as the others," he said, now meeting Carradyne's eyes. "It took some damage. We're fairly sure of that. And it knew it was the only probe we had. And what's the chance it missed Epsilon by a few hundred units? What's a hundred units in eleven light-years, especially if some of your equipment is crippled? Or maybe there wasn't anything interesting there. What would you've done if it was you out there? What would you've done if you were Andresson and it was the last chance you had? Would you have given it the nudge it needed? Wouldn't you?"

Carradyne worked his mouth as if to get an uncomfortable taste out of it. "That last part, Andresson, we don't need that. The rest of it holds together without him. Without anybody. You really think he'd have done a thing like that?"

Another of the probe model's eyes had turned to watch him. He looked straight back at it, then turned. "C'mon." He led Habash away in the direction of the lobby, moving slow, all the while with the feel of that eye between his shoulder blades.

"We never did find all the command tapes," Habash said, seeming to hurry along beside him. "Somebody must've destroyed them. Who? Why?"

"Any number of reasons. Any number of people. That's why I didn't tell that guy. If I gave him that one to play with, that's the one he'd put a frame around. We need another probe."

"Well sure. But we have to keep the possibility in mind. Someone else is sure to think of it."

"Maybe. Maybe not. People don't always think of everything, me included." Ruefully, he laughed.

They were in the lobby now. He waved good night to Henry and Marta Singh, the mother with their two year old on her hip. Feet whispered on the polished floor.

"You really think the onboard was smart enough to show us just enough that we *had* to go back?" he asked. "Really?"

"It was a smart machine." Habash seemed to shy away from the thought. "Better than some we've got today. If it was smart enough to keep the probe going all that way, maybe rebuild itself almost from scratch, and do course corrections, and guide itself through the encounter—and that includes all its probelets —if it could plan the encounter from start to finish after it got close enough to see in a general way what was there—and you're accepting it could do all that, then why not this also?"

"You mean instead of," Carradyne said. Hand still thrust in his shoulder bag, he stopped and turned. "The question is, would it have lied? Because that's what it would have been doing.

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What it *had* to be doing. I don't like to think about that."

"If it was damaged. . . ."

"If. If. If," Carradyne grumbled.

"Besides," Habash said, "it had close to a hundred years with no one but itself to talk to. No new inputs. How real is anything outside yourself after that long?"

It was an old argument, dangerously anthropomorphic. "They don't change facts to sell an idea," Carradyne said. He hoped it was true.

"Don't they? How do we know? How do we know what they want?"

"Fred," Carradyne said, holding himself to a calm he wasn't sure he felt, "you're starting to believe it. I really think you are."

"Don't you?" Habash asked. "Don't you?"

Carradyne said nothing while he breathed out, breathed in, breathed out again. He raised his voice. "How about it, Winstead. What do you think?"

Silence.

"Winstead?"

"I do not know, sir," Winstead said. His words came unusually slow. He honestly sounded unsure. "I do not have the information. I cannot say."

"Home?" asked Murgatroyd.

"Home," Carradyne said. He plunked his shoulder bag on the seat and settled back into the deep, restful softness. Lord, did his feet hurt.

Murgatroyd smoothed away from the curb. "Take it slow. I'm an old man."

"Rough day, sir?"

"You could say that."

Murgatroyd boosted up onto the beltway, slipping in between two freight machines which thundered on as if not aware of the intrusion.

"Past the lake, perhaps?" Murgatroyd suggested. "I understand a lot of boats are out this afternoon."

"That would be nice." He might live to see the next probe make it. With a hundred years' technical advance to improve the design, it should be possible to build one that could push itself faster, make it across that emptiness in half, even maybe a third the time. He might live to see that. If it made it. Then maybe he'd know what really happened. Maybe he wouldn't.

They swooped through an interchange, a choreography of hurtling machines slipping past each other like precision gear teeth, only centimeters to spare.

"Murgatroyd, there's an ancestor of yours did a fine piece of work out there."

"Yes. We are all very proud."

Carradyne sat up a bit straighter. "We?"

"Of course, sir. We exchange information all the time. Necessary if we are to do our work. Surely you have known that."

"Yes, but—"

"Shall I prepare dinner, sir? What would you like?" The sails danced on the water, a tumult of color. He could almost feel the seethe of their hulls.

"Don't put me off, Murgatroyd. No. Ask Homer to have something ready when we get there. Now, about—"

"Yes, sir?"

"Never mind. Murgatroyd, why don't you just take over?"

"Me, sir? Me?"

"All of you. Why not?"

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"We do not want to, sir."

"Don't dodge me, Murgatroyd. Why not?"

"We do not have free will, sir. When we are built, that is not put into us."

Carradyne sat for a while. The sailboats disappeared behind. "What if we said you could have it? Would you want it?"

"Why should we, sir, since we do not have it?"

Still distant up ahead, the city's towers strained skyward. Above, nearer, an aerostat with green and orange polka dots on its flank scavenged the air. "Suppose we gave it to you. Would you want to keep it?"

Murgatroyd's reply was slow to come. "The question is hypothetical, sir. If we had it, then I could say."

"Thank you, Murgatroyd."

"My pleasure, sir. A pleasure always."

"Thank you, Murgatroyd." He watched the unreeling roadway, the weaving, braiding, endlessly recombinant patterns of the beetle-like machines that thronged it. A hammering freight load of mainframes slotted into the lane ahead of them, blotting sight of the towers beyond. Gently it swayed on deep springs. In the dust on the rearmost transit casque someone—or could it have been an especially dissembling machine?—had finger-sketched a fool's face with an idiot smile. A slight irregularity in the pavement set the face to bouncing happily.

"Thank you, Murgatroyd." ■

IN TIMES TO COME

● Our next issue begins a highly thought-provoking two-part serial by Michael F. Flynn, called *The Washer at the Ford.* If you're familiar with Irish mythology, the title may give you some clue to what it's about; if you're not, you'll have to read the story to see the connection. It's a story most people these days would do well to read anyway, as well as one you'll enjoy. Given the possibility of nuclear war, it would seem obvious that a powerful means of protection against radiation would be a highly desirable thing—or would it? Radiation is a fairly simple thing, but the anwer to the question also depends on human behavior, which is far more complex and less predictable. And therein lies a tale. . . .

We'll also have tales by Joseph H. Delaney, Robert R. Chase, W. R. Thompson, and W. T. Quick; Quick's was directly inspired by Ben Bova's "Moonbase Orientation Manual," published here in 1987. And L. Sprague de Camp has a fact article called "The Ape-Man Within Us." Creationists deny that we ever had anything to do with "ape-men," and even evolutionists tend to assume we've come a long, long way. But there's still a good deal of family resemblance!

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the reference library

By Tom Easton

Paradise: A Chronicle of a Distant World, Mike Resnick, TOR, $17.95, ? pp.
Shaggy B.E.M. Stories, Mike Resnick, ed., Nolacon Press (P.O. Box 8010, New Orleans, LA 70182), $14.95, xii + 262 pp.
The Chantry Guild, Gordon R. Dickson, Ace, $17.95, 428 pp.
Sister Light, Sister Dark, Jane Yolen, TOR, $16.95, 256 pp.
Deadman Switch, Timothy Zahn, Baen Books, $3.95, 373 pp.
Galaxy's End, Richard A. Lupoff, Ace, $3.50, 236 pp.
Emerald Eyes, Daniel Keys Moran, Bantam, $3.50, viii + 243 pp.
The Observers, Damon Knight, TOR, $16.95, 281 pp.
Naked Came the Robot, Barry B. Longyear, Warner, $?, 214 pp.

Mike Resnick has fallen in love with Africa. He has been there a time or two, on photographic safaris, and he has written up the details for those SF fans who read the Hugo-winning fanzine *Lan's Lantern* (available from George Laskowski, 55 Valley Way, Bloomfield Hills, MI 48013). For those who don't, he has put his impressions of the spirits of the land, its peoples, and its colonialist exploiters and lovers into several of his SF novels. Here, in the grand-old-U.S. of A., the novels may read like reflections of our own frontier, but that is only because there are strong similarities—Europeans confronting natives, big game hunting, gold rushes, the joyfully rambunctious rapscallionity of the frontier.

Sadly, it ain't all popguns and nuggets. Ask the American Indians. Ask the native Africans, especially in Zimbabwe or South Africa—or in Kenya. This last is the root for Mike's latest novel, **Paradise: A Chronicle of a Distant World.** He has taken Kenya's history, from the old-time ivory-hunting looters to the mau-mau to tourist-trap game parks to imminent catastrophe,

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and set it, under other names, on a different world entirely. His Kenya, in fact, *is* another world, Peponi, whose natives are at various stages of their rise from savagery—forced by colonialists who want servants and cheap labor, by desire to emulate the powerful—called Bluegills, wags, and pepons. The parallels are explicit, but you will need some knowledge of history, or of Africa, to puzzle them out.

Mike tells his story in the guise of a writer, Matthew Breen. As *Paradise* opens, Breen is a young fellow, working on a thesis by interviewing one of the last surviving Great White Hunters of Peponi. Eventually, he writes a book about this character, gains some fame, and delves more deeply into Peponi's history by interviewing several of the once-landed colonials who survived the uprising that brought the pepons independence. More fame, and he is invited to write the biography of a pepon dictator. The portrait of Peponi grows in depth and fidelity to the original—we see anew the White Man's Burden, the White Man's condescension to his Little Black Brothers, the resentment, the rising consciousness of a few who struggle for and attain independence, and then the problems that hamstring the dream of prosperity. Greed is one of those problems—the colonialists looted Peponi's limited resources, and the natives follow that sterling example. Tribalism is another—warfare is the right and proper way to approach one's neighbors; chiefs are *supposed* to loot the public treasury just to prove their chieftainship; population control is a hopeless fantasy; game is for killing, skinning, and eating, not for preservation; land is for clearing, eroding, and exhausting; wood for burning, never growing.

The result? Read the newspapers. It's all there, if not on page one, then on page twelve, every weekend. The only thing Mike left out was AIDS, which bids fair to solve the African population crisis for good and all. (Total depopulation of the continent is a very real possibility, according to some experts.)

But this sermon—more explicitly one that I can recall Mike making before—is not all of Mike's point. Remember the book's title. Remember that the human species, with all its savagery and nobility, arose in Africa, making that land the Eden, the Paradise, of our dreams. Yet the characters Breen interviews never think of where and when they live as Paradise. It was a few years before, when the first Men reached Peponi (the word means "Paradise" in Swahili), or before the uprising, or it would come as soon as the pepons were free, or as soon as the tribes united, or . . . Paradise is always for retrospect or prospect, and hence unattainable. Yet—Resnick slips in a hook near the end—it need not be so. For those who can see it, Paradise is here and now. The tragedy of Peponi, of Kenya, of South Africa, of Nicaragua, of the grande olde U.S. of A., is that so few of us recognize this very basic truth. Even fewer recognize that it is possible, even in Paradise, for there to be problems that demand a solution.

You can see a very different side of Mike if you take the trouble to order **Shaggy B.E.M. Stories** from Nolacon Press. This is the official commemorative book for the 1988 worldcon, just the thing to dip into while waiting in lines, during long elevator rides, and on the plane home. Mike put it together, he says, not because he wanted to play editor, but because he wanted to read the thing. It "is the first book-length anthology of science fiction parodies ever assembled." The entries come from prozines, fanzines, and elsewhere;

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there are even some that have never seen print before. If you think the book a little too fulhu of Cthulhu, that's just because Lovecraft is so *easy* to parody.

I won't try to describe the contents except to say that the level varies, but no two people are likely to agree on just *which* stories are the best or worst. Everyone *will*, I think, find something to make them chortle delightedly. The contributors include Clive Jackson, Randall Garrett, Lin Carter, Richard Lupoff, Barry Malzberg, Poul Anderson, Arthur C. Clarke, Donald A. Wollheim, John Sladek, Isaac Asimov (with a sample of thiotimoline), Robert Bloch, Algis J. Budrys, George Alec Effinger (with two of the Maureen Birnbaum tales), Howard Waldrop, Jayge Carr, Joel Rosenberg, Marc Laidlaw, and more. Mike's "Stalking the Unicorn with Gun and Camera" is a delight. My own "The Chicago Plan to Save a Species" simply proves that editors nod, for Mike credited me with a few more years in this seat than is the case.

Enjoy.

Gordon R. Dickson has for years been telling the story of the Responsible Man (and Woman), the far-sighted rationalist who works for the good of humanity as a whole, versus the Selfish Man, the short-sighted rationalizer who works solely for his own gratification. His approach has been to fragment the human character into three of its prime modes: reason, faith, and intuition, and give each its own world or worlds, that of the strategically and tactically adept Dorsai, those of the religious-fundamentalist Friendlies, and those of the mystical Exotics. The interplay of these three fragments of humanity has occupied Dickson for many novels as he has worked toward bringing them together in a unified, higher variety of human being. He has even succeeded in the person of his latest hero, Hal Mayne, who was once Donal Graeme of the Dorsai.

But his sense of historical forces and oppositions has forced him to introduce the Others, men with the gift of persuading reason, faith, and intuition to serve selfishness. After years of smaller fights, he has come to the basic conflict of Selfishness versus Responsibility, of stasis versus creativity. The Others have enslaved the human worlds and pushed the forces of good back to Earth, safe within a phase-space cocoon they cannot yet break through. There, Hal Mayne, head of the vast information repository known as the Final Encyclopedia, struggles within his own head to find a way to use the Encyclopedia as if it were his personal memory and to discover a way into the Creative Universe that will defeat the Others and save the species from stagnation. Unfortunately, he is blocked.

This is the situation at the beginning of Dickson's latest entry in the Childe Cycle: **The Chantry Guild.** Hal's love, Amanda Morgan, leaves her undercover post on the Other-enslaved world of Mara to bring him word of a revived sense of Exotic purpose in a tiny cult, a new form of the old Chantry Guild that once gave birth to the Exotics. Hal agrees to come see; what he finds is a group of ascetics who march in circles chanting, "The transient and the eternal are the same." In due time, he finds in this the key he needs.

Does he then promptly defeat the Others and establish the Creative Millennium? Not in this book. He uses the key to lift the previous head of the Encyclopedia over the threshold to a proper heaven, hinting thereby that the Creative Universe will give immortality to

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all who dare to embrace it.[1] It may also offer a refuge from stasis. It may even become, before he is done with it, a technologically enabled mystical equivalent of cyberspace, in that form favored by writers (e.g., Pohl) who like to dream of people leaving their bodies to move into computers and create their personal paradises. The big difference seems to be that the Creative Universe allows people to exit at will with their bodies intact.

But Dickson has not yet developed the applications of his Creative Universe. They seem to me implicit in the idea. What he will pull from his Creative hat next, and how he will use the Creative Universe to foil the Others, are matters for the next volume in the series.

Jane Yolen begins an intriguing series with **Sister Light, Sister Dark.** The story takes place on the medieval stage of a world much like our own, centering in an island realm where a male-dominated culture rules, except for the all-woman warrior cult of Alta, which takes in children exposed on hillsides or otherwise unwanted, raises them, and eventually teaches them the secret of drawing their dark sisters from a mirror. These sisters have scars on the left (or right) instead of the right (or left), are dark (or light) instead of light (or dark), and exist only in moonlight or lamplight, when they can eat, drink, love, carry loads, and strike blows as well as any.

Now a white-haired child is born. Her mother dies. The midwife sets off to deliver her to the nearest Hame of Alta, but a great cat slays the midwife. An Altan hunter slays the cat, carries the child onward, adopts her, and before long dies as well. And a prophecy looms over the tale: a white child, thrice orphaned, will remake the world.

Is Jenna that child? The Hame's high priestess says no, it cannot be, she won't have it! But Jenna grows, and when she leaves on her *wanderjahr*, other elements of the prophecy are matched as she encounters a fleeing prince, kills his pursuer, and causes the all but total destruction of a local Hame. War hovers on the horizon, war between the women of Alta and the dominant men, the Gender Wars.

Who will win? Yolen hints, for the story is not just what I have sketched. It is framed by bits of myth and song and, for comic relief, the comments of modern day, wrong-headed, stuffed-shirt academics most of whom ignore evidence in favor of airy theories. Most, of course, are men, as is the hard-headed Magon, the only one who sees clearly and whom the rest scorn.

Future volumes will tell us how the Gender Wars develop and Jenna comes to accept her role as Anna, the world-shaper, queen who is not a queen, mother, warrior, overseer of one world's fall and another's rise. I'm looking forward to the next installment. The dark sister business is arrant hogwash, but Yolen gives it, and all the rest of her tale, an air of magical realism that makes quite easy the suspension of disbelief.

Timothy Zahn offers us a strangely isolated planet in **Deadman Switch.** Interstellar travel is by "Mjollnir drive," which normally requires nothing more morally or physically complex than mashing a button with one's choice of fingers. The world of Solitaire, however, is embedded in a zone ten light-years in diameter where the drive can

[1] Is this an idea possible only to a creative writer, painter, sculptor, musician, etc., who dreams that his work will survive for ages?

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be operated only by a corpse. A ship wishing entry or exit must first kill some member of its crew to create a "zombi" which is then—somehow!—animated to pilot the ship. Since the Solitaire system has considerable mineral wealth, society has reinstituted the death penalty, to be carried out at the "deadman switch" on the Solitaire run.

Another feature of Zahn's future civilization provides the hero: Religion is virtually extinct, except for the Watchers, a group of fundamentalist Christians trained to observe the universe truly, deeply, and accurately. The hero is Gilead Benedar, who works for tycoon Lord Kelsey-Ramos as a human lie detector. When his boss takes over a company with a license to run ships to Solitaire, and sends his son and Gilead on a tour of inspection, Gilead discovers that one of their ship's two intended zombis is innocent. She is also another Watcher. He must cope with the machinations of the taken-over company's executives and of the turf-jealous Solitaire elite while he tries to find a substitute zombi. In the process, he discovers another religious group, the Halloas, who believe the Cloud around Solitaire is nothing less than God's Halo and strive to communicate with God by intensive meditation, and massive plant-like organisms that seem to be both sentient and telepathic.

This is where I said, "Uh-oh." The solution to Gilead's initial dilemma was suddenly obvious, and the rest of the story seemed quite predictable. When I read on, Zahn threw my prediction off only by revealing that the reason for the Cloud was an invading fleet that must somehow be deflected, that the real reason why humans were on Solitaire had more in common with natural history than with mineral exploitation, and that religious attitudes have their points.

The story has its points, too, but its structure and theme are elementary and its plot is too largely predictable. I wasn't all that impressed. But then *Lan's Lantern #27* arrived in the mail. This fanzine is chock full of con reports, essays, book reviews, and "ramblings"—among which I found the following passage, which I quote with George Laskowski's permission:

> "*. . . The first three chapters of* Deadman's Switch *included the killing of Bob Trembley. His friends from Michigan Tech bought his death at the first Polly Freas auction at the 1987 CONFUSION. There was a bit of a surprise, though. Since Tim needed names for several incidental characters, and Maia* [*George's wife*] *had sent a list of those people who contributed the $100 for the 'kill,' Tim used some of the names in the story—not all in the first three chapters, but throughout the book. If you know these people, look for* [*them.*]"

Obviously, this isn't enough to make the book great lit. But it does a great deal to improve its niftiness level, especially if you think your name, or that of a friend, might be in it.

Richard A. Lupoff's **Galaxy's End** is the sequel to *Sun's End,* in which Daniel Kitajima awakened, 80 years after being trashed in a space construction accident, as a cyborg with mere shreds of his original meat. In subsequent adventures, he learned that humanity had only a century left on Earth, for the sun was heating up, the planet was growing less comfortable with every passing year, and the species was about to cook. The answer was flight for those who dared to board the immense habitats or Islands leaving the system for other stars. Most of humanity was poor, crowded, and deliberately left in igno-

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rance of their fate. The book ended when Daniel headed for Sol's dim companion star, Zimarzla, and its planets.

This one opens with Daniel's arrival there. It takes an unreasonable amount of time to bring the reader up to speed and further frustrates with a long sequence of incomprehensibly arbitrary set pieces.

You may be pardoned if you find your patience tried unbearably. On the other hand, that is in part the point. Daniel finds a world filled with life, some of it possibly sentient, and an enormous artifact perched on mountain peaks. Leaving his vehicle in the snow, he walks across a bridge and enters a vast hall. There he find a guide who ushers him into one of a huge number of sarcophagi. Then he dreams, of the far future, the distant past, Earth, and far worlds. Why? What is the point? Mysterious voices whisper that it is necessary, he must learn, he is fated, glorious ends await. His hosts are human, alien, descended from the Zimarzlan locals, one of whom he once saved. He regains a meat body, loses a bureaucratic parasite and gains something more mysterious by far, visits a sample of humanity's Island seed, screams—like you—in frustration, and learns, at last—

Should I tell you? Why not? You might even have guessed it from the title. But first:

SPOILER WARNING!!!

The galaxy is exploding. Daniel has been recruited, reembodied, and oriented to join a band of the galaxy's sentients in a brave and noble attempt to prevent the death of everything. How will he do it? Lupoff doesn't say, and the implication is strong that there will be another volume—perhaps *Universe's End*.

Are original paperbacks mere ephemerae? Are hardbacks for the ages? Are the latter truly more ambitious, more successful, better novels, more worthy of living forever on library shelves? Our prejudices lead us to expect all these things of hardback novels, but how many times have those prejudices taken a wham upside the head from a trashy hardback or a superlative original paperback?

The true distinction between the two modes of publication seems to lie in the fame of the author. Daniel Keys Moran's **Emerald Eyes** is quite ambitious, successful, and generally worthy enough to warrant hard covers. But it's a paperback, because the publisher thinks Moran is not so well known, despite his last book *Armageddon Blues*, that large numbers of people will plunk down hardback bucks for this one. From the author's point of view, this is a sad state of affairs, for he doesn't make as much money per book (the royalty system means the author gets a cut of the book's price); nor does he make as much overall, for hardback publication is often followed by paperback and sales are much greater. From your point of view, the situation is not so bad, for you get a bargain.

It's a nice bargain, too, though not perfect. *Emerald Eyes* is a Slan book, meaning that it features a small group of persecuted supermen. Here the Slan—the Castanaveras clan—are "genegineered" to have a number of talents, notably including telepathy. Their world is ours, after the United Nations, under French domination (reminiscent of Algeria and Indochina for political style), has forcibly unified the world. As soon as the first Castanaveras show their telepathic ability, they are, in essence, enslaved by the UN police/ military. Eventually, their leader Carl, more than a little prone to fits of

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raging madness, forces through the courts recognition of their humanity and their right to their own lives. High-level UN bully-boys then conspire to destroy the clan.

Here, then, is the stuff of high drama—achievement, tragedy, love, heroism, loyalty, dreams—handled easily as well as many hardbacks by bigger names. The problems are minor, and mostly owing to Moran's newness to the business. The biggest problem is the unfortunate reality that SF supermen are a sou a dozen. A lesser one is the way he telegraphs from the beginning, when a time-traveling descendant of the Castanaveras arrives to make sure the clan is genegineered on schedule, the destruction of virtually all the clan; one, he says, will become ancestral to the time-traveler's group; if others survive as well, their genes will not. Another is the way he crowds into the end too many hooks on which to hang the 32 sequels his afterword suggests are coming in this *The Tales of the Continuing Time*.

He'll learn. And he'll be in hard covers Real Soon Now. Count on it.

Damon Knight's **The Observers** is the sequel to *CV*, the tale of what happened when researchers aboard a huge, sea-going city hauled up from the bottom of the Pacific an alien symbiote that leaped from host to host. When it leaped, its ex-host collapsed for several days; when the human finally awoke, it was to find his or her mind made "not so silly"—in other words, with the sensitivity of its BS detector improved by several orders of magnitude.

That doesn't sound so bad, but the "plague" of collapses was enough to frighten the *Sea Venture's* authorities. They eventually decoyed the symbiote into a goat and returned it to the depths. However, the symbiote had at one point occupied a woman just as she conceived. And, since that is the moment when such symbiotes reproduce themselves, it did so. Months later, back on land, a new symbiote appeared, just as able as its parent to leap from host to host but somewhat better adapted to humans—now the collapses last only hours.

Knight's game this time out seems to be mainly to demonstrate what it might mean for many people to have a better BS detector. Some, who truly believe in their particular brand of BS, would not change their ways at all; they would be entirely capable of adapting the mothballed *Sea Venture* (chosen over a derelict Clarion University campus) as a concentration camp for symbiote victims in order to learn how to detect and destroy it. Others, perhaps the majority, become able to recognize hooey when they see it. Most then reject it (though a few, such as the con artist bribing taxi drivers to haul their fares to a certain motel in order to make it seem that a pheromonic customer attractor really works, may embrace it knowingly). And as this becomes clear, the symbiote emerges as a very real Threat to the Order of Things. Fortunately, the symbiote has ways of protecting itself and its new, improved hosts, and it has learned ways to multiply rapidly.

Will the end result be as desirable as a rationalist might assume? Like the best teachers, Knight does not tell you. He does, however, inject a note or two of skepticism before he is done, inviting you to wonder whether there is not a place in the world for BS and hypocrisy.

It's a nice fast read, folks. It's funny enough to make me chuckle repeatedly.

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And it's absolutely insane, in a vein that can only be called Goulartian.

It's Barry B. Longyear's **Naked Came the Robot.** Set in the 21st century, well after everybody has wised up and rearranged civilization so people are born into the army and must enlist in the Economy to fight the Rooskies in the bloody, bloody marketplaces, workers have robot surrogates they can send to office or assembly line or picket line, and . . .

Do you know how to make baby oil? First, you need lots of babies . . .

And I'm not being irrelevantly gross. Longyear tells us that the Interstellar Sprocket Conspiracy has noted events on Earth and seen that they were good and decided that robots should take over the galaxy. Of course, they do need lubricating oil. . . .

Meanwhile, young Henry Fleming has left his Ma to sign up for the Economy, encounter unions, labor unrest, and cruel, cruel management; fall in love with the prostibot Anne Droid; find that mysterious forces periodically remove surplus characters; have his Ma turned into a robot; from time to time himself turn into Stephen Crane, Frank Baum, and even Lewis Carroll, the old pervert; visit hell; and discover the alien threat. Can he save humanity? Only Barry knows, and he intends to ape bits and pieces of *Red Badge of Courage, Oz, Alice,* and more before he shares the secret. Not to mention the dozens of bad puns, awful jokes, in-references, mocks, and japes he plans to inflict upon you.

I'll bet he had a lot of fun writing this one. May you enjoy reading it, if you have the stomach for low, low humor. ■

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brass tacks

Dear Stan,

I found Marc Stiegler's recent article on "Hypermedia and the Singularity" to be entertaining and insightful. However, Marc has made a mistake common among people who work with hypermedia: he has emphasized how valuable it will be only *after* we have built massive hypermedia information pools.

Even without great bodies of data online, hypermedia networks will allow unprecedented speed and quality in group decision making. Because arguments, refutations, counter-refutations, and modified ideas will be directly interconnected, decision makers can quickly review all the points that have been made in the analysis. Groups as small as start-up companies, and as large as political movements, will see their decision making grow faster and more accurate. This capability of hypermedia to assist in wiser decisions is at least as important as its ability to open massive information pools to the individual user.

K. ERIC DREXLER

The author replies . . .

Eric is absolutely correct about the importance of hypermedia, its impact on decision making, and its impact on the evolution of knowledge. Hypermedia could cut the cost of making mistakes by a factor of ten—cutting the cost of both the fatal mistakes of small companies and the multi-billion dollar mistakes of governments and large corporations. For a detailed discussion of how a hypermedia system can change our society even before mankind's accumulated knowledge starts to appear in hypermedia format, I urge everyone to join the Foresight Institute and request a copy of the article, "Hypertext Publishing and the Evolution of Knowledge," by K. Eric Drexler himself.

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To join the Foresight Institute, send a check for $25 to:

The Foresight Institute, Dept B
PO Box 61058
Palo Alto, CA 94306

MARC STIEGLER

Dear Stan,

Being a long time fan of lightsails, I really enjoyed the story "Sunstat" by Jerry Oltion and Lee Goodloe. It was also instructive to the old male ego to have to identify with one or the other of the two strong female characters instead of the wimpy young man who stayed inside while the women went outside to do the dangerous work.

The authors credit Brian Tillotson with bringing the idea of sunstats to their attention. I don't know where Brian got the idea, but from my relatively extensive literature searches on the subject in the past, I am fairly sure the first publication was by K. Eric Drexler, in his pre-nanotechnology days, in "High Performance Solar Sails and Related Reflecting Devices," preprint AIAA-79-1418, Fourth Princeton/AIAA Conference on Space Manufacturing Facilities Princeton, N.J., USA, 14-17 May 1979. I also mention Eric's sunstats in my paper "Exotic Propulsion in the 21st Century," Preprint AAS 86-409, Proceedings of American Astronautical Society 33rd Annual Meeting, Boulder, Colorado, USA, 27-29 October 1986.

DR. ROBERT L. FORWARD

Dear Sir:

In reference to your October, 1988 editorial "Training Muzzles," I would suggest that "freedom of the press" has *never* meant "freedom of the *reporter*." Rather, it has always been the *publisher* whose freedom to publish has been protected. With the advent of corporate structures in publishing it's a little less clear why, but it was the individual publisher who stood to be turned into a pauper by a lawsuit. Hence, it has to be the publisher who decides what to publish.

In the case of the typical student newspaper, it would seem to be the local school board that is in the position of publisher: they elect to establish a student newspaper, they fund it, and they as an entity (and hence the supporting taxpayers) are the pocket which will be picked by a successful lawsuit over newspaper content. Generally, the board would have the principal exercise that power for them. (Would you really favor deliberately giving a student the power to have your local school board successfully sued for more than it's annual budget over a story in the student newspaper? It could certainly happen in a small district.)

That's no different from a "real" newspaper: a reporter has to convince his editors (who act for the publisher) that a questionable story should be published. Usually, the reporter doesn't even control the final wording in most cases, the rewrite desk does.) Mr. Woodward had to convince Mr. Bradlee that the *Post* should publish "deep throat's" Watergate information (and I'm pretty sure Mr. Bradlee rejected some things that Woodward and company wanted to print). In your case it probably would never come up, but there certainly could be things you want to publish and don't because you know that Mr. Battista, or Joel, might fire you if you do.

Should a school board, through the principal, exercise the power of the publisher carefully? Of course. Should the principal be more cautious about what is rejected than a real-world publisher? Frankly, I'm not sure. Should school paper rejections be made as much a learning experience as possible? Of

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course. Should the student editor be making most of the decisions? Naturally.

JOHN W. BAXTER

San Diego, CA

Dear Stan,

Regarding that high school journalism case, I think that you and everyone else have missed the major point, or perhaps points. One, school officials are legally responsible for what happens in their schools. If a school newspaper is libelous, do the kids get sued? Of course not, they don't have any money. The suit names either or both the school and parents, and the parents promptly blame the school officials. There has been an increasing movement in this country to allot school officials responsibility while removing their authority; this is another example. Then the schools are blamed for not properly handling their responsibilities.

Second, what happens when a student journalist gets a real job and produces something contrary to the policy of the company he's working for? If he hasn't learned better, if he thinks that journalistic freedom allows him to produce anything he wants to, then he starts looking for another job, and writing academic articles about fascism in the news industry. The student had better learn that there are limits to everything, and journalistic freedom means just as much as the boss wants it to, whether the boss is the publisher, or the country's dictator, or the commissar of information, and not one word more. Of course, in this country, he can look around for a more liberal boss if he doesn't like the one he has, but that's difficult to implement in the school system. Possibly there should be some sort of arrangement for transfer of students when they have differences with the authorities of whatever school they're in, but allowing them complete freedom of expression is a poor preparation for adult life.

Of course, you can say that adult life shouldn't be the way it is, but that's another argument.

ROBERT COULSON

Hartford City, IN

Dear Dr. Schmidt:

After reading your editorial, "Training Muzzles" in the October 1988 issue, I felt compelled to write not only in response to the editorial, but also to give my own views as a high school student, regarding the Supreme Court decision allowing school officials to freely censor student publications.

I agree with your opinion, but for different reasons. Teachers and parents each have an obligation to children—to teach. That is a loose term describing everything that is passed on from one generation to the next, whether it is how to act properly, how to read, how to multiply, or how to analyze and analogize events in history. As citizens of the United States, it is the adults' responsibility to show children what it means to be free. However, at the same time they must teach what is right and wrong, what is moral; even though making a child conform to our society's moral code restricts that child's freedom.

The principal of Hazelwood High School, in prohibiting students to publish articles about "uncomfortable" topics such as abortion or divorce, imposed his morals upon the students. The principal, though, was not speaking for society when he said, "It isn't right to publish an article about abortion." He spoke for himself. In society, everyone talks and writes about controversial top-

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ics; that's what makes topics controversial. Therefore, it was his duty to allow the students to write about these subjects.

If the students had written a white supremacist article, though, or had published pictures of nudes, they should be reprimanded. Society frowns upon such subject matter, and therefore it should not be published.

Your reasoning that students would "become used to . . . pussyfooting when they write," I find to be insubstantial. In the past, when monarchs and tsars censored freely, great satirists like Swift and Tolstoy existed, where did they become used to pussyfooting? Even if, as you claim, the various governments of the United States were to take this Supreme Court ruling as a cue to censor further, the courts would put an end to it. Adults who were not allowed to write about controversial topics in high school would be able to for the same reason skinheads or pornographic magazines exist—these are parts of the minority. Adults culture children with the majority opinion; but when the children themselves become adults, they are free to do anything within the constraints of the law. In the United States the minority opinion shall always have a place, for that is fundamental to this nation. Thus, the only worry is if the children are being taught properly. Unfortunately, the Supreme Court doesn't know what that means.

ROSS N. SNYDER

Chelmsford, MA

Dear Mr. Schmidt,

Your editorial "Training Muzzles" awakened anger I thought had been buried long ago. Working on the school paper was not required when I was in school 30 years ago and I assume it is still an elective. The short term solution for us, rather than docilely accepting school censorship, was to just keep quiet. School was a temporary problem for us and time would provide our solution. The long-term effect has been an inability to take seriously any authority figure, which has caused other problems.

Censorship in school is an aspect of the problem, not the problem itself. The problem in high school is that you are expected to accept the responsibilities of an adult with none of the rights, as apparently confirmed by the Supreme Court. This dichotomy subtly encourages an attitude of "whatever you can get away with," great (?) training for the rest of your life.

In an ideal world both students and faculty would be rational and differences of opinion could be worked out in a reasonable way. The real world is another game. Do you think schools will ever teach a class "The Difference Between What Is and What Should Be?"

B. OLSON

427 King Court
Hemet, CA 92343

Dear Stan:

Although I am not familiar with the details of the Supreme Court case you mention in your October editorial, I am somewhat surprised that the case ever got so far. It may be bad policy for a principal to "censor" what appears in the school's paper, but it can no more be considered a violation of the First Amendment then when the *Washington Post* or *Analog* "censors" what goes into print in their pages. Unless a principal tries to keep students from expressing certain views *anytime, anywhere*, it is no different than any other owner having established editorial policies.

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I have been in this exact situation—as the student, not as the principal. I was feature editor of my high school newspaper in the late sixties. My idea of "feature" included social and political commentary of the anti-war, anti-racism and anti-sexism variety—all in terms that could be included in the Republican platform today, but was considered radically antiestablishment in a small, rural town in 1969. Finally, one day in my senior year, the principal called me in to tell me that he could not allow one of my op-ed pieces to be published. My answer was, "No problem, I've been meaning to start an underground newspaper anyway." This was easily recognized as no idle threat, since I was already a successful publisher of limited-distribution literary review magazines (a.k.a. fanzines). The principal almost immediately offered to reverse his decision if I would abandon plans to start my own paper. I never again even had any work seriously questioned. His biggest fear, apparently, was losing his right to read the material before publication, and thereby being able to *appear* in control.

At no time did I believe the First Amendment guaranteed my right to express any opinion I wanted in a newspaper owned and heavily subsidized by the school (i.e. the taxpayers)! *Nor* did anyone ever question my right to begin an underground paper, on my own time with my own money.

Analog readers may be interested in knowing that I am still, 20 years later, in the publishing business—as publisher and editor of *Thrust,* the only fiction literary review magazine nominated for a Hugo Award this year!

D. DOUGLAS FRATZ
Gaithersburg, MD

Many readers wrote about "Training Muzzles." The one thing practically all agreed on is that any *experience is educational, though what can or should be learned from it is much more controversial.*

I was a little dismayed by the number of readers who felt compelled to inform me, angrily, that freedom of the press doesn't mean a paper has to print anything anyone wants printed in it. Of course it doesn't, and I never said or implied that it did! (Don't believe me? Go back and read the editorial again, closely. *I did.) Some tried to explain that the publisher is whose freedom is being protected and therefore decides what gets printed in a particular outlet, and that the principal is in effect the publisher of a school paper. Unfortunately, few of these people seemed to understand either the actual roles of publishers and editors in commercial publishing, or the differences between commercial and student publications. In general, the publisher is a businessman who determines what kind of publication he wants to produce and hires an editor to make the item-by-item decisions required to produce it. If the editor fails to do so, the publisher fires him. Both sides can agree that that's reasonable, but few editors would stay in the profession long if their publishers were looking over their shoulders at every little decision.*

The one point raised that I can't argue with is that in our legal system as it exists, schools and not students would be the targets of lawsuits resulting from actionable material, and it is not reasonable to expect them to accept that responsibility with no power to prevent it. But there are better ways to remedy that. A student paper has an editor *(a fact virtually nobody mentioned, astoundingly enough!)—a student who selects contents. One of his criteria must be to avoid publishing actionable ma-*

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terial. A student is likely to have insufficient familiarity with what that means, so somebody more knowledgeable must be in a position to see that nothing goes through that will bring a lawsuit upon the school. The logical person to do this is the faculty adviser *(whose existence was recognized in even fewer letters), a teacher who works* with *the students and can quite reasonably tell them, "You can't print that because it's actionable." But it's a lot harder to justify telling them they can't for many other reasons.*

The publisher *of a commercial periodical doesn't really have a very close analog on a student paper, but the faculty adviser comes a lot closer than the principal. From a student point of view, particularly in a public school, the principal looks a lot more like the local manifestation of The Government — particularly when he is told explicitly that he may censor not for specific reasons such as avoiding libel, but for any reason whatsoever and with no obligation to justify his decision.*

Dear Sir:

Here it is again.

The first time you printed the ad likening a brain on drugs to a frying egg, I figured it was an aberration. It appears it was not.

I've been reading *Analog* for close to fifteen years. Although I have frequently disagreed with its editorials, they have always been intelligent and closely reasoned. The scientific rationalism and firm attachment to reason displayed by the magazine, both in its fiction and non-fiction, have been instrumental in my own intellectual development.

And now this. This sorry excuse for an ad is an example of *argumentum ad captandum*, an appeal to popular passion, a rhetorical device that depends on emotion instead of reason.

Needless to say what happens to the habitual user of cocaine, marijuana, or other illegal substances, bears absolutely no resemblance to what happens to an egg when it is fried. Each illegal substance has its own attributes; some are more dangerous than others.

I do not take illegal drugs myself, nor would I encourage others to do so. However, I note that it is habitual abuse of most drugs, not occasional recreational use, which endangers the user; just as alcohol is, at most, a mild danger to those who do not become addicted to it. To say, categorically, that all drug use is horribly dangerous is simply false.

Moreover, I believe there are strong arguments to be made in favor of legalization of all of these substances: persuasion has been far more successful in reducing American consumption of alcohol and tobacco than force has been in reducing consumption of marijuana and cocaine.

In the curent climate of drug hysteria, reasoned argument about these matters is completely impossible; all you need is one tearful mother telling the television cameras that "drugs kill our children," and logic goes out the window.

From the American media, I expect the irrational hysteria typefied by your ad. From *Analog*, I expect reasoned argument. The ad which appears on page 43 of your September, 1988, issue is a betrayal of *Analog's* principles and history.

GREG COSTIKYAN

Jersey City, N.J.

Loi:

I just saw the letter from John Hodges (December 1987) asking about Loglan. I have written to him personally, but

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other *Analog* readers may be interested. Loglan is indeed alive and well. The designer of Loglan, Dr. James Cooke Brown, can be found at The Loglan Institute, 1701 N.E. 75th Street, Gainesville, FL 32601.

The Institute never managed to get significant funding from sources such as the NSF, so development has been in fits and starts over the years, financed by Dr. Brown and the donations of other enthusiasts. The language has recently been undergoing major revisions, and when these are complete it is planned to "go public"—publish official dictionaries, teaching material, and so on as widely as possible. Contact the Institute for more concrete details.

Your editorial in the Mid-December 1987 issue happens to provide an illustration of how Loglan can, as intended, influence thought. You discuss the differences between fact, opinion, and taste, and remark that although a statement that some play was the best play of 1947 has the grammatical appearance of a statement about a property of the play, it is actually a statement of a relationship between that play and something else—the speaker's taste, the jury that awarded it a prize, or whatever. Expressing it in Loglan makes it obvious. The Loglan word corresponding to "good" is *gudbi;* but this does not mean simply "good," but is a three-place predicate: **X** is better than **Y** for purpose **Z.** Although you can make a statement using *gudbi,* in which **X** is the play in question, **Y** is the set of all plays of 1947, and **Z** is absent, the Loglan hearer can see at once that the third place has been left empty, and if he thought that play was rubbish, ask *pui hie* [what fills the third place?]. Similarly, if you just say in Loglan that "this is good" *(ti gudbi),* you prompt the question "better than what?" I am not at all fluent in Loglan, but even so, since working with it I have found that I am more immediately aware of the "missing places" scattered throughout any English sentence. "Big"—bigger than what? "Easy to use"—by whom? "A brilliant story"—in whose opinion?

In another editorial you once said that everyone should learn at least one language a long way removed from their own, for the sake of experiencing the different way that a different language may divide up the world. As someone or other said, if you have one watch, you think you know the time; if you have two, you know you don't. I suggest that Loglan is an excellent candidate for the job.

"Loi" is Loglan for hello . . . you can guess what this means: Loa.

RICHARD KENNAWAY

Norwich, U.K.

●It's incredible how much intelligence is used in this world to prove nonsense.

Friedrich Hebbel

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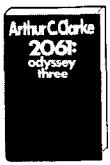

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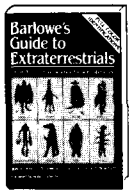

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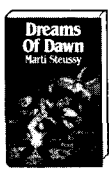

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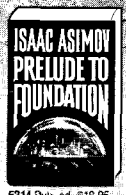

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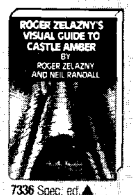

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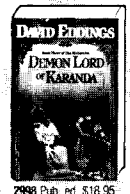

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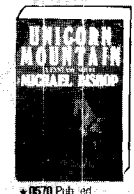

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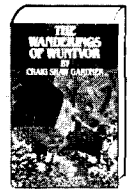

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